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Abstracts

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Introduction

Domenico Parmeggiani

President SPIGC – Società Polispecialistica Italiana dei Giovani Chirurghi, Ricercatore di Chirurgia Generale, Seconda Università di Napoli, Napoli, Italy

Dear colleagues,

The XXIV National Conference of the Italian Multidisciplinary Society of Young Surgeons and II International Conference of the European Society of Young Surgeons-European College of Surgeons will be held in June 2011 in Naples, in the charming location of Castel dell' Ovo, historical symbol of Naples. This Castle, between history and myth is 'the living symbol of the research' (Virgilio). A fortress between see and ground, between rocks and sky, the perfect location for an international conference, a meeting point between past and future. This communion has been, for more than 20 years, the philosophy of our society: young surgeons meet the experience of skilled surgeons, showing their art, solving their doubts and reaching their knowledge of mastership. When a surgeon is not anymore a young apprentice and not jet an experienced masters, then I believe he is a young surgeon. This Conference doesn't have age restrictions, and it's dedicated to that never-old part of every surgeon that always needs to learn; that's what makes our work an extraordinary work! This is the reason why I've dedicated this conference to my father (the honorary president) who taught me to love this work, my guide and my master.

Like it often happens to lovers, surgery is sadly going through hard times from both economical and emotional points of view. Catullo in his Disillusion Carmen LXXII reminds us: '...quod amantem iniura talis cogit amare magis, sed bene velle minus'. Love and disillusion (towards our profession), is the feeling of many young surgeons, and I would say this is the main topic of my Conference. Bioethics, Biotechnology, Research, Education, New Technology, Risk Management are other topics will be developed with a multidisciplinary approach. One of the reasons of our National Conference success (2500 contacts, 1500 conference subscriptions, 1300 associates, 400 abstracts published on the European Journal of Surgical Research and more than 200 lectures) is our multidisciplinary approach to Specialties: Anesthesiology, Anal and Colo-Rectal Surgery, Bariatric Surgery, Cardio-Vascular Surgery, Day Surgery, Emergency Surgery, Endocrine Surgery, Endoscopy, Experimental Surgery, Gynecology, Hernia Surgery, HPB Surgery, Interventional Radiology, Minimally Invasive Surgery, NOTES, Neurosurgery, Ophthalmology, Oral and Maxillofacial Surgery, Orthopedics, Otolaryngology, Pediatric Surgery, Plastic Surgery, Thoracic Surgery, Transplantation, Upper G.I. Surgery, Urology. Others key-points are Live Surgery, Training Courses, Fellowships and Travel Grants. I hope you'll enjoy the scientific standard of the Conference, the magical atmosphere of an exclusive location, many interesting cultural and social activities and of course our brotherly entertainment.

To solve Disillusion I'll wait for you in Naples to bring your Light.

Domenico Parmeggiani

1

Autologous Fat Graft as New Therapeutic Approach to Late Effect of Radiotherapy in Head and Neck Cancers

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Objective: Late toxicity on connective tissue after irradiation has mainly a vascular etiopathogenesis. In this setting the treatment with autologous fat graft seems an intriguing approach as adipose tissue has been considered as an important source of a population of mesenchimal stem cells, called Adipose-Derived Stem Cells, which may contribute to an effective and more physiologic neoangiogenesis.

The objective of this study was to evaluate the clinical effectiveness of purified fat transplantation in the treatment of side effects induced by radiotherapy in head and neck cancer.

Methods: Between December 2009 and September 2011, 9 patients undergoing therapy for side effects of radiation treatment were enrolled, and autologous fat graft were performed according the technique described by S. Coleman. Therapy outcomes were assessed by aesthetic and functional score (0 to 4) and LENT-SOMA scale, that evaluate the late effect of radiotherapy.

Results: Clinical outcomes consisted in an overall improvement or remission of symptoms probably thanks to progressive regeneration and neovessels formation, likely induced by ASCs. Aesthetic, functional and LENT-SOMA scores has improved. Tissutal fibrosis and scar retraction were reduced, tissues gained softness and elasticity, allowing functional improvement in head elevation and neck flexion and in dysphagia. Furthermore, we recorded no postoperative complications, and high patient satisfaction.

Conclusions: The use of autologous fat grafts is a potentially effective surgical procedure for treating the late toxicity of radiotherapy, probably mainly because of his neoangiogenetic properties. Moreover, the graft is readily available, cause minimal tissue reaction and the surgical technique is reliable and safe. Nevertheless further investigations are required.

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2

Surgical Results for Multiple Primary Lung Cancers

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Objective: The development of a multiple primary lung cancer (MPLC) is not rare in long-term survivors after curative resections. We analysed our experience in order to verify surgical results and long-term survival in our patients.

Methods: From 2000 to 2010, 86 patients with MPLC (two tumours each, total 172) were treated. Our criteria for the definition of a synchronous or metachronous cancer are those proposed by Martini and Melamed.

We had 13 patients with a synchronous tumour and 73 patients with a metachronous tumour.

We performed 102 lobectomies, 19 completion pneumonectomies and 51 segmentectomies or atypical resections.

Of 172 MPLCs, 72 adenocarcinomas, 65 were squamous carcinomas, 16 bronchiolo-alveolar carcinoma, 6 adenosquamous carcinoma, 4 anaplastic carcinoma, 3 small cell lung cancers, 3 large cells carcinoma, 1 atypical carcinoid and 2 other tumours.

Of 172 MPLCs, 143 were N0 disease (83,1%) and 29 were N1 or N2 disease (16,9%).

Results: Survival at 5 and 10 years for all patients was 78% and 49%, respectively.

Five-year survival for patients with metachronous and synchronous disease from the time of initial diagnosis of cancer was 83% and 50% (P. 0.10), and 10-year survival was 53% and 0% (P. 0.10), respectively.

Survival after the development of a metachronous lesion was 40% at 5 years.

The 5-year survival of patients with metachronous tumours undergoing standard surgical procedures of the second tumour was 69% (P. 0.009); the 5-year survival of patients undergoing atypical or segmental resections was 28% (P. 0.009).

Conclusions: From our experience an aggressive surgical approach is justified in patients with MPLC and offers the greatest chance for long-term survival, but limited resection remains a valid option in high risk patients with limited pulmonary function.

3

Modified Clinical Pathway in Flail Chest: A Preliminary Experience

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Objective: Previous studies have demonstrated a linear relationship between the numbers of rib fractures and complications, including mortality. Patients with severe chest trauma may benefit from operative repair both in short and long term outcomes. We instituted an aggressive clinical pathway to evaluate the effect of our implementation on early results.

Methods: We prospectively considered a period of 12 months (June 2010–May 2010) in which all traumatized patients affected by flail chest or more than four rib fractures were surgically managed. We evaluated the influence of patient and trauma characteristics on early post-operative outcomes.

Results: A total of 31 patients (mean age 61 years, range 18–84 years) underwent surgical repair of the chest, less than 24h after the initial trauma. Average number of rib fractures was 10.4. Associated lesions occurred in 18 patients. Comorbidities included cardiovascular disease (18 patients), BPCO (9 patients) and metabolic disorders (13 patients). Mortality was null while morbidity rate was 25.8%. The presence of more than one co-morbidity ($p = 0.04$) and extra thoracic cage lesions ($p = 0.001$) were risk factors for post-operative complications. Mean intubation lenght was 2.5 days. A positive relationship was found with COPD ($p = 0.002$), metabolic disorders ($p = 0.04$), the association of more than one co-morbidity ($p = 0.02$) and the simultaneous presence of extra-ribs lesions ($p = 0.04$). Mean ICU stay was 5 days. COPD patients ($p = 0.007$), patients with more than one co-morbidity ($p = 0.03$) and those having important associated lesions ($p = 0.002$) had longer stay. Mean hospitalization duration was 15 days. The same risk factors of ICU stay maintained their negative impact on duration of hospital recovery.

Conclusion: Early surgical stabilization of flail chest with STRACOS clips and STRATOS bars is a feasible and safe technique. The report of our experience shows promising results. The clinical pathway of patient with severe flail chest should take into account the surgical stabilization.

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Frequency of True Short Oesophagus in Non Axial Hiatus Hernias (NAHH)

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Objective: The length of the abdominal oesophagus (AO) in patients undergoing surgery for NAHH is still controversial. This lack of information may concur to the high rate of hernia's recurrence after repair. We measured intra operatively the distance between the gastroesophageal junction (GOJ) and the hiatus in patients undergoing surgery for NAHH.

Method: 34 patients (26 females 76.4%, mean age 65.3 range 41–84 yrs) underwent a laparoscopic approach. After full isolation of the GOJ and complete resection of the sac, the position of the gastric folds was localized endoscopically and two clips were applied. The distance between the clips and the apex of the diaphragm was measured with a dedicated ruler before and after the esophageal dissection. In case of AO < 1.5 cm a Collis-Nissen was performed.

Results: Mean duration of symptoms was 100 months (r. 12–360), reflux symptoms were moderate in 21/34 (61.7%), severe in 13/34 (38.3%), oesophagitis was present in 16/34 (47%). NAHH were type II (para-oesophageal) in 4 (11.8%), type III 24 (mixed) (70.6%), type IV (organo-axial volvolus) in 6 (17.6%). Before dissection the AO was ≤1.5 cm in 26 pts (76.4%), median length of the mediastinal dissection was 10 cm (range 6–13 cm). After dissection AO was still < 1,5 cm in 17 (50%), respectively in 0/4 of type II, in 13/24 of type III and in 4/6 of type IV. No difference was calculated between AO longer or shorter than 1.5 cm with respect to duration and severity of symptoms and oesophagitis. 17 pts (50%) underwent the Collis-Nissen.

Conclusions: Short oesophagus is present in 50% of NAHH, mainly in type III and IV. The intra operative measurement of the length of the AO is an objective method for recognizing these cases.

5

The Prevalence and Role of Gastro-Esophageal Prolapse in Gastro-Esophageal Reflux Disease

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Objective: Prevalence of gastro-esophageal mucosal prolapse within GERD was investigated as well as the clinical profile and treatment outcome.

Methods: GERD patients referred in the period 1980–2008 were considered. Patients underwent clinical interview, endoscopy, barium swallow, manometry and pH-testing. After surgery or during medical treatment they were regularly followed up with interview, radiology, endoscopy. Results were assessed by semi quantitative scales grading symptoms and esophagitis.

Results: Prevalence of gastro-esophageal prolapse in GERD patients was 8% (70/898) (40M, 30F, median age 48, IQR 38–57). 100% had dysphagia and reflux symptoms, 98% (69/70) had epigastric or retrosternal pain. Belching decreased intensity of or resolved pain in 70% (49/70). Esophagitis was documented in 90% (63/70) and hiatus hernia in 67% (47/70). Gastro-esophageal prolapse versus GERD patients had greater severity of pain ($p < 0.05$) associated with belching, although GERD patients had greater severity of esophagitis ($p < 0.05$). Nissen was offered to 100% and accepted by 56% (39/70) (median follow-up 12-months, IQR9–41) with 2 Collis-Nissen techniques for associated true short esophagus. Patients who did not accept surgery and were medically treated (median follow-up 60-months, IQR12–72) reported persisting pain in 98% (30/31) and belching in 45% (14/31), 90% (28/31) had no more GERD symptoms and esophagitis and only 3 patients had moderate to severe esophagitis after PPI suspension. After surgery, 98% (38/39) resolved pain, reflux symptoms and esophagitis although 3% (1/39) had severe esophagitis.

Conclusion: Gastro-esophageal prolapse has a relatively low prevalence within GERD. It is characterized by epigastric or retrosternal pain as well as by the need to belch to attenuate or resolve pain. Probably pain is due to the mucosal prolapse and consequently only surgery may be effective.

6

Role of Blebs and/or Bullae Detected by High Resolution Computed Tomography (HRCT) in Predicting Recurrence after a First Episode of Primary Spontaneous Pneumothorax

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Background: The role of blebs and/or bullae detected by HRCT in predicting recurrence in primary spontaneous pneumothorax (PSP) is not clarified. Positive and negative predictive values (PPV, NPV) of recurrence on the basis of HRCT findings are the end points of the study.

Methods: Retrospective evaluation of 176 patients treated for PSP who underwent to chest HRCT scan were analyzed. Univariate and multivariate analysis were performed.

Results: Ipsilateral recurrence was observed in 58% of patients, of these contralateral recurrence developed in 18%. Two patients (1%) presented exclusive contralateral recurrence. Recurrences were not significantly related with age, gender, Body Max Index and smoking habit. Air-spaces pulmonary lesions were found on HRCT in 69% of patients. Smokers presented more frequently bilateral air-spaces lesions ($p = 0.013$) and bullae ($p = 0.001$), whereas no differences were found regarding blebs ($p = 0.336$). Ipsilateral and contralateral recurrence rates were significantly related to the presence of blebs and/or bullae: PPV and NPV for ipsilateral recurrence and contralateral pneumothorax were 77.7% and 85.5% ($p < 0.001$) and 15.7% and 97.4% ($p = 0.016$) respectively. Recurrence risk increased up to 82% in case of multiple blebs and/or bullae. Multivariate analysis confirmed the predictive role of air-containing lesions on HRCT (relative risks of ipsilateral and contralateral recurrence of 32,4 and 6,2 respectively).

Conclusions: The presence of blebs and/or bullae on HRCT after a first episode of PSP is significantly related to the development of either an ipsilateral recurrence or a contralateral episode of pneumothorax. An early surgical treatment of the ipsilateral side could be proposed.

7

Abdominal Hypertension and Leg Varices: Is There a Relation?

P.F. Atelli, S. Dimitroulis, L. Goffredi, A. Sellitti, A. Molisso, S. Apperti, M.D. Della Rocca, M. Apperti

Objective: Today we discuss more and more about Compartmental Syndrome and its possible implications not yet well- defined but with a great doctrinal and practical potential; The purpose of our research is to verify if exist or not a relation between endo-abdominal hypertension and development of leg varices (primitive or recurrent). We will study if the hypertension can have a rule in the etiology of this multifactorial pathology.

Methods: In this first year we have measured the endo-abdominal pressure of 15 patients (10M; 5F) with Leg chronic venous insufficiency and compared the values with control group (4pz; 2M; 2F). We have considered various parameters including: habit of sports or works that take up the abdominal press, age (44±2 vs 40±2), BMI (38±2 vs 26±3), Abdominal Sagittal Diameter (SAD) (28±1 vs 18±1) and Abdominal Pressure measured through Kron's Method (16±2 vs 3±1).

Results: A first important element is a relation between the growth of SAD and of BMI supported also in the scientific literature. Another important data is the clear relation between abdominal pressure and obesity. We can note that the increase of BMI correspond to a increase of endo-abdominal pressure (16±2). Our data have highlighted an evident relation between endo-abdominal pressure and incidence of chronic venous insufficience (IVC).

Conclusions: Until now this study seems to open suggestive windows on the future. The hope is to explain and quantify the rule of those risk factors in the IVC pathogenesis and maybe formulate a valuation score for each of them.

8

Effectiveness of Ag Dressings in the Ulcers Management After Debridment

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Objective: The removal of nonliving tissue and the reduction of the bacterial load are very important steps in the ulcers management favouring the tissue repair. At this stage a growth of bacterial load can impair the healing. The aim of our study is evaluate the rule of Ag dressing in the ulcer healing after debridment.

Methods: We have study a group of 30 patients with a well-cleaned and no-infected ulcers; we have divided the group in three homogeneous sub-groups:

- Group A (control): using a no-antiseptic dressing.
- Group B: using a low-silver content Hydrofiber dressing.
- Group C: using a high-silver content hydrofiber dressing with a deep action.

We have performed a bacterial culture samples at time-zero, after 2 weeks and after a month.

Results: In the A group 5 ulcers at the 15th day post-debridement showed signs of critic colonization or infection that forced us to use systemic antibiotic therapy.

In the B and C groups none of ulcers showed sign of infection achieving a complete healing in 50, 90 and 100 days on the base of their dimension respectively 10, 25–50 and over 50 cm^2.

Conclusions: The Ag dressings have been able to avoid the development of new infections regardless of silver concentration (group B & C). The idea is that the low-Ag content is useful for only contaminated ulcers and the high-Ag for the infected one.

This study shows that the Ag dressing are very useful for the healing process reactivated by the debridment.

9

The Endovascular Procedure for Ulcers in Day Surgery

P.F. Atelli, L. Goffredi, A. Molisso, A. Sellitti, S. Dimitroulis, M.D. Della Rocca, S. Apperti, M. Apperti

Objective: If the hypertension is the cause of leg ulcers why the operation for his resolution have so much failures? Aim of this study is double: to find new and most effective approaches in terms of number and speed of healing and the identification of protocol that reduce the hospitalization and convalescence days, the dressings and the follow-up controls.

Methods: We have selected 11 patients with leg chronic ulcers for over 6 month excluding ones with pathologies that can interfere with cicatrization. We performed the operation in day surgery using endovascular laser technique and trans-illumination (personal technique). The debridement was performed using Versajet®. The covering of the ulcer was performed during the same intervention. 7 Patient received the definitive cutis implant on the average after 20/25 days: 6 using autologous cutis, 1 engineered cutis. Only in one case has been possible to implant autologous cutis 'one step' in the first intervention.

Results: 5/11 (45%) show a definitive engraftment of new cutis on the average after 35 days. In 3/11 patients (27%) we don't perform a definitive implant because the ulcer showed clearly a re-epithelialisation after 20 days. The patient with one strep implant healed after 20 days. One patient (9%) with a partial engraftment healed after 60 days. One patient (9%) was excluded for not observing the prescriptions.

Conclusions: The Day surgery form seems to be most appropriate for the care of this patients, provided that the patient can 'well-manage' himself. This approach reach good results in particular in term of healing speed obtaining a better compliance of tissues for the engraftment of implant.

10

Axillary Dissection with Ultrasound Scissors: Our Experience

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Objective: Despite the emergence of breast conservation surgery and the sentinel node biopsy, axillary dissection (AD) remains the most commonly performed operative procedure on lymphatic system for breast cancer today. Conventional AD using electrocautery or ultrasound scissors is associated with a moderate degree of operative morbidity in 35–50% of patients. Much of this morbidity has been attributed to the large post limphadenectony raw area, cut lymphatics and use of electrocautery. Ultrasonic dissection using the ultrasound scissors has recently emerged as a safe alternative to electrocautery.

Methods: We studied the utility and advantages of this instrument over electrocautery for performing axillary dissection. The operative and morbidity details of seventy breast cancer patients who underwent axillary dissection using the ultrasound scissors were compared with 70 matched controls operated with electrocautery by the same surgical team.

Results: There was no significant difference in the operating time between the ultrasound scissors and electrocautery group (36 and 30 mins, $p > 0.05$). The blood loss (60 ± 35 ml and 294 ± 155, $p < 0.001$) and drainage volume (200 ± 130 ml and 450 ± 230 ml, $p < 0.001$) were significantly lower in the ultrasound scissors group. There was a significant reduction of drain days in ultrasound scissors group (mean one and four days, $p < 0.05$). There was significant difference in the seroma rate between the two groups (10% and 30%).

Conclusions: Axillary dissection using harmonic scalpel is feasible and the learning curve is short. Ultrasound scissor significantly reduces the blood loss and duration of drainage as compared to electrocautery.

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Breast Cancer Stem Cells: New Target for Therapy?

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Objective: Normal adult tissue stem cells awake from a dormant state to grow, differentiate, and regenerate damaged tissue. They also travel in the circulation and colonize distant organs at sites undergoing tissue repair. These same traits are utilized or co-opted by metastatic cancer cells. The cancer stem cell theory proposes that tumors emerge from a subpopulation of cancer cells that possess stem cell properties. This theory has profound implications for therapy.

Methods: The research was carried out by consulting the following medical websites: Medicus Medline Index, Lilacs, Sciello, PubMed (National Library of Medicine), Google Academic. The selection gathers articles written in different languages, English in special, published from January 2000 to December 2010. 5 out of 12 articles were selected with theoretical models of therapy related to stem cells properties.

Results: A small number of cancer stem cells may lie dormant following conventional therapy and tumor remission, only to re-emerge and regenerate the entire recurrent cancer. Most

relevant working models were analysed. Of those the approach of suppressing gene transcription pathways were considered.

Conclusions: Consequently, it has been proposed that targeting cancer stem cells is the only way to obtain durable cancer treatment responses. Several strategies for targeting cancer stem cells have been proposed. Nevertheless, a number of issues must be investigated and resolved before effective treatments targeting cancer stem cells can enter clinical testing.

12

Metastasis to the Breast from an Adenocarcinoma of the Lung: A Case Report and Review of the Literature

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Objective: Breast metastasis from extra-mammary malignancy is rare. Based on the literature an incidence of 0.4–1.3% is reported. The primary malignancies most commonly metastasizing to the breast are leukemia-lymphoma, and malignant melanoma.

Methods: We present a case of metastasis to the breast from a pulmonary adenocarcinoma, with extensive micropapillary component, diagnosed concomitantly with the primary tumor. A 73-year-old female presented with dyspnea and dry cough of 4 weeks duration and a massive pleural effusion was found on a chest radiograph. Additionally, on physical examination a poorly defined mass was noted in the upper outer quadrant of the left breast.

Results: The patient underwent bronchoscopy, excisional breast biopsy and medical thoracoscopy. By cytology, histology and immuno histochemistry primary lung adenocarcinoma with metastasis to the breast and parietalpleura was diagnosed. Both the primary and metastatic anatomic sites demonstrated histologically extensive micropapillary component, which is recently recognized as an important prognostic factor.

Conclusions: The patient received chemotherapy but passed away within 7 months. Accurate differentiation of metastatic from primary carcinoma is of crucial importance because the treatment and prognosis differ significantly.

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Primitive Neuroendocrine Tumors of the Breast

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Objective: Breast cancer neuroendocrine tumours are heterogeneous group of neoplasms defined by some of the following: endocrine growth pattern, argyrophilic granules, expression of neuroendocrine markers, and ultrastructural finding of neurosecretory granules. To qualify as a neuroendocrine carcinoma these features must be predominant.

Methods: The research was carried out by consulting the following medical websites: Medicus Medline Index, Lilacs, Sciello, PubMed (National Library of Medicine), Google Academic. The selection gathers articles written in different languages, English in special, published from January 2000 to December 2010. 12 out of 45 cases were selected with neuroendocrine tumors pattern. Cases with: tumor size, lymph node status, proliferation rate, neuron-specific enolase (NSE), Ki-67 immunohistochemistry were considered.

Results: The cell of origin is hypothesized to be neuroendocrine, located between the basal myoepithelial and luminal epithelial cell. May present with systemic ectopic endocrine hormone-related syndromes such as adrenocorticotropic hormone (ACTH), parathyroid hormone (PTH), calcitonin, and epinephrine. Immunohistochemically, they stain with neuroendocrine markers such as neuron-specific enolase (NSE) (100%), and about half are positive for chromogranin and synaptophysin. Most of these carcinomas express estrogen and progesterone hormone receptors, including half of all small cell carcinomas.

Conclusions: Most endocrine neoplasms (about 85%) in the breast are well to moderately differentiated. It is important to be aware that extramammary neuroendocrine metastases can rarely occur in the breast. The presence of intraductal carcinoma and hormone receptor positivity helps confirm the mammary origin of these tumors. Prognostic data on these carcinomas are limited owing to the lack of case-controlled studies.

14

How Chemoradiation has Modified Surgical Procedure in Rectal Cancer in the Last Years: Our Experience

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Objectives: Chemoradiation (CR) for stage II and III rectal cancer, has been already accepted since several years by all surgi-

cal institutions. But how this therapy has modified surgical procedures is not the same all over the world. Surely in these last years CR in rectal cancer has been used more as neoadjuvant than as adjuvant therapy, because of its less toxicity and more effectiveness.

Material and Methods: From March 2003 to March 2011 we observed 218 patients with colorectal cancer; 62 were rectal cancer. We have considered the last 13 cases which underwent CR: 11 as neoadjuvant (group A) and 2 as adjuvant therapy (group B).

Group A: 11 patients with T2-T3 N0–1–2 rectal cancer (3 to 10 cm from anal margin) underwent rectal endoscopy/abdomen and thoracic CT/pelvis MNR for staging before CR. They underwent to 4500–5000 Gy radiotherapy and 200 mg/mq/die 5 FU continuous infusion for 5–6 weeks before restaging. After 6 weeks from the end of CR all patients were operated with laparoscopic technique. After resection they did not undergo any therapy and were controlled with periodic follow up by our Institution.

Group B: due to their limited rectal neoplasm (T2 N0–1) 2 patients decided for only an endoscopic resection of rectal cancer followed by CR.

Results: Group A: patients had a median survival of 40 months (range 5–95); specimen hystological examination demonstrated the tumor regression after CR in all cases (Dworak 1–3). Complete patological response was found in 3/11 (28%) patients. Mortality rate was 0. Morbidity rate included 1 left ureteral injury, 1 massive pelvic bleeding (19%). Surgical procedures included 3 Miles, 7 low anterior rectal resection, 1 coloanoanastomosis.

Group B: the median survival was 82 months (range 82–83); patients underwent CR post-resection without complications and they are still alive and in follow-up.

Conclusion: CR has modified surgical procedures in rectal cancer. Miles' operation has become less frequent than in the past. 30% of complete pathological responses may represent a group of patients that will not be operated in the next future. CR do not cause any more difficulties in laparoscopic procedure and do not increase mortality and morbidity rate. Multidisciplinary approach has provided better results not only on the overall survival but in particular on the quality of life of the patients.

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Combined Treatment of Non-Small Cell Lung Cancer with Synchronous Brain Metastases: A Single Center Experience

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Objective: This study analyzes our experience with combined treatment of non-small cell lung cancer with synchronous brain metastases.

Methods: Between 1992 and 2010, 32 patients were treated with neurosurgery (or stereotactic radiosurgery) and lung surgery. Patients were divided into two groups according to their preoperative mediastinal work-up: group A (CT scan) and group B (FDG-PET scan).

Results: Twenty-seven patients had one brain metastasis and five had two. Neurosurgery was performed in 10 patients, stereotactic radiosurgery in 21 and both approaches in one. Seven patients underwent chemotherapy after the cerebral procedure. Pulmonary resection was complete in 28 cases and incomplete in four. Histological findings showed adenocarcinoma in 19 cases, squamous cell carcinoma in 8 and large cell carcinoma in 5. All patients underwent adjuvant chemotherapy. Overall 1, 2 and 5-year survival rates were 81%, 44% and 24% respectively. The median survival was 22 months. Univariate analysis showed a better prognosis for complete resection ($p = 0.009$), adenocarcinomas ($p = 0.021$), N0 disease ($p = 0.038$), and Group B ($p = 0.034$). Multivariate analysis showed that only the radicality of the resection ($p = 0.034$) and Group B ($p = 0.041$) were independent prognostic factors.

Conclusions: Our experience confirms that selected patients with non-small cell lung cancer and synchronous brain metastases may be effectively treated by combined therapy. Complete resection, adenocarcinoma histology and N0 disease were prognostic factors. The incorporation of FDG-PET scan into the preoperative work-up may translate into a survival benefit.

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The Role of Repeated Surgery for Thymoma Recurrences

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Objective: This study describes our experience with surgical treatment of thymoma recurrences.

Methods: Between 1993 and 2010, among 96 thymomectomies performed, we observed 15 patients with recurrence of thymoma (16%). Twelve of them underwent 22 reoperations overall. Three patients were excluded from surgery because of their poor performance status.

Results: Recurrences ranged from 1 to 5 episodes. Median interval between resection of thymoma and first recurrence was 47 months. Site of recurrence was intrathoracic in 20 cases and abdominal in two cases. Surgical approach for recurrence was posterolateral thoracotomy in 16 cases, thoracophreno-laparotomy in one, VATS in one, sternotomy in two and laparotomy in two cases. Radicality was achieved in 9 patients (75%) and it was inversely correlated with the number of recurrences ($P < 0.05$). The remaining three had iterative debulking procedures. None of the patients had a histological progression of disease. After recurrence all patients underwent chemo and/or radiotherapy. Nine patients (75%) are currently alive, eight of whom are free of disease (66%). Two patients died because of progression of disease and one of complications of red cell aplasia. Survival was inversely correlated with the Masaoka initial stage IV, and number of recurrences > 2 ($P < 0.05$).

Conclusions: Surgical resection should always be attempted in thymoma recurrence even if complete resection cannot always be achieved. Considering the indolent nature of these tumors, an iterative debulking approach is always advisable to reduce the tumor size and improve long-term survival. An adjuvant therapy combined with surgery offers the best management of recurrences.

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An Unusual Case of Anastomotic Leak

A.N. Bhuva

Anastomotic leak is one of the most serious complications of colorectal surgery, associated with high mortality and morbidity. Common risks include surgical technique, infection, comorbidity and medication including anaesthetic and steroids. We present a severe case of leak unusual as due to methotrexate use and its timing (within 12 hours post operation). Illustrated with intraoperative images.

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Analysis of Blood Tests to Detect Complications in the Elective Post Operative Period

A.N. Bhuva

Fast track protocols are well established, and early discharge is becoming the vogue. This obviates the need for C reactive protein and coagulation screens in the post operative period. We show these are requested frequently, unnecessarily, and do not alter length of stay or complications.

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Management of Ruptured HCC: Two Case Reports and Review of Literature

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Spontaneous rupture of HCC is a rare but dreadful complication. The exact mechanism leading to it is not clearly defined: subcapsular location, tumor necrosis and rapid growth seem to be predisposing conditions. Among 33 patients with HCC who underwent hepatic resection between December 2007 and June 2011 in our Institution, two patients had ruptured HCC. The case A was a 55-year-old male patient who came to our attention for an hemorrhagic HCC (3 cm) with mild hemoperitoneum (MELD score 7). We performed a wedge resection of S6 and histological exam demonstrated an extensively necrotic HCC. The case B was a 75-year-old man who presented to our attention for a ruptured formation (14 cm) of left liver compatible with HCC and hemoperitoneum (MELD score 7). We treated patient conservatively with blood derivate transfusion until hemodynamic conditions stabilized (Hb 7.7 mg/dl on admission), then we performed a left lobectomy. Histological exam demonstrated a trabecular HCC with large necrosis areas. Patients are still alive at 13 and 4 month follow-up, respectively. In these patients the primary purpose is to stabilize hypovolemic shock, but the choice of therapeutic approach is very important for prognosis. Since surgery is a definitive treatment, it is the first option if hepatic function allow it. TAE is an alternative method to achieve hemostasis in patients with poor liver function or multifocal HCC and it can be a bridge treatment preliminary to surgical resection in unstable patients. Our experience shows that, if patient conditions permit, surgical resection is the best therapeutic choice.

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Laparoscopic Placement of Self-Locating Catheter for Peritoneal Dialysis: Our Experience and Review of Literature

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Among available devices for peritoneal dialysis, the self-locating catheter, is a milestone for its ability to ensure a permanent and reliable access to peritoneal cavity. Our experience includes the placement of 24 peritoneal catheters (2008–2011) with videolaparoscopic technique (3 trocars). This technique allows the introduction of the catheter into the Douglas cavity under direct and optical vision. Among 24 patients treated, two died not for extra-renal causes, one has undergone kidney transplant, one is currently on hemodialysis for reasons not related to the technique. Self-locating catheter related complications were one dislocation and a case of peritonitis; no case of subcutaneous tunnel infection, obstruction or malfunction. The self-locating catheter, introduced by Di Paolo, has the classic form of Tenckoff, but with a small cylinder of tungsten at the tip that leads to a continuous gravitation towards peritoneal cavity with a reduced risk of dislocation. This has been amply demonstrated by Di Paolo et al. that reported in a large series of cases a dislocation rate of 0.8% after placement of self-locating catheter compared to 12% after placement of Tenckoff catheters. Furthermore they have also shown a reduced incidence of other complications such as peritonitis, infection, malfunction, obstruction. These data were confirmed by other authors with

smaller series of cases. Laparoscopic self-locating catheter implantation should become the standard of care for clinical practice with secure benefits for patients.

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Biliary Tract Stenosis: Diagnostic Flow-Chart for an Appropriate Therapeutic Strategy

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Introduction: The characterization of biliary stenosis is one of the biggest challanges of current diagnostics. Despite different ways of investigation are available, none of these is able, alone, to discriminate between malignant and benign stenosis. In addition, clinical, in both cases, shows jaundice and cholestasis, unhelpfull for the diagnosis.

In fact, several studies on biliary stenosis diagnostic evaluation, show that jaundice is not caused by cholangiocarcinoma in a percentage ranging from 18 to 43% and it has been demonstrated that in percentages close to 50% there is an over/under-diagnosis with a consequent risk of over/under-treatment.

Considerating these discrepancies, our Hepato-Biliary-Pancreatic Surgery Unit with Gastroenterology, Interventional Radiology and Pathology Units discussed, adopted and promoted the following diagnostic flow-chart for an appropriate therapeutic strategy.

Discussion and Conclusions: Regarding the ERCP diagnostic role, in our opinion, is better to avoid it because the bile duct rehash due to method, even more with protesis placement, determines an increased degree of inflammation and cellular atypia on biopsy samples leading to false positive.

Drainage by ERCP and protesis placement or PTBD is performed in the pre-operative work-up in patient with important jaundice or as palliative treatment in inoperable patients.

When histological exam is uncertain, surgery and biopsy for extemporaneous histological exam is performed, and according to it is decided the suitable surgical strategy, preceded by drainage when necessary.

In conclusion, this methodology, is an attempt to ensure a proper diagnostic work-up and the appropriate treatment.

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Different Survival in NSCLC According to Proliferative Indices Values in Radically Resected Stage I

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Objective: To assess the significance of proliferative indices (Mib1, p53, Mitotic Index 'MI', Apoptotic Index 'AI' & Turnover Index 'TI') as prognostic factors after surgery for NSCLC.

Methods: Between 2000 and 2005, 147 patients, surgically treated, for stage I NSCLC, were reviewed. Only patients affected by adenocarcinoma and squamous cells tumors were considered. The pathologist evaluated the Mib1 & p53 expression and the following indices: 'MI', 'AI' and the 'TI' as 3xMI-AI. Patients were divided according with the median value of each index. Survival was also evaluated according: age, sex, T status, pleural infiltration, histology and grading.

Results: Between the 147 patients only 139 were considered for the study (3 lost at follow up and 5 not tumour related dead). Age, sex, T status, histology, visceral pleural infiltration & type of resection resulted not significant in affecting the survival. Also the 5yrs survival rates according with MI, AI and TI were not significant ($p = 0.83$, $p = 0.79$ and $p = 0.62$ respectively). The same index was than used in adenocarcinoma and squamous group separately. Despite no differences in 5yrs survival were found among the squamous tumors, in the adenocarcinoma series a lower 'TI' was significantly associated with a better 5yrs survival ($p = 0.006$) as well as the AI ($p = 0.033$) and the p53 expression is singnificantly higher in the worst prognostic group ($p = 0.024$).

Conclusions: Our results confirms that 'PI', 'AI' and particularly the 'TI' can be applied as prognostic indicator for the pulmonary adenocarcinomas confirming their different behaviour respect the squamous and stressing the importance of an histology tailored treatment.

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Combined Treatment Lung Resection and Laparoscopic Adrenalectomy in Patients with NSCLC and Adrenal Metastasis

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Objective: The treatment of patients with adrenal metastasis from non-small cell lung cancer (NSCLC) remains controversial;

several retrospective studies have indicated that a combined resection of the primary lung cancer and a solitary adrenal metastasis may be beneficial. We propose a combined technique of lung resection and laparoscopic approach to perform the adrenalectomy in these patients.

Methods: We report the cases of 2 male patients (70 and 57 years old) arrived to us with a diagnosis of NSCLC cells associated to a solitary adrenal matastasis. In one case it was done a right superior lobectomy and a lynphoadenectomy while for the other case it was done a left inferior lobectomy; both the patients had a removal of the adrenal metastasis by laparascopic approach in the same operation.

Results: In both cases it was done a radical resection of the primary NSCLC and of the adrenal matastasis. The operative time was respectively of 4 and 5 hours, with blood loss lower than 50 ml. They have been in hospital bed respectively 8 and 9 days. There were no intraoperative or postoperative complications. Both the patients received postoperative chemotherapy and after 1 year from the operation they are still alive.

Conclusions: We conclude that combined lung resection and adrenalectomy for clinically solitary resectable metastasis can be performed safely without any added perioperative and postoperative morbidity. In selected patients laparoscopic adrenalectomy for solitary metastasis is a safe procedure, comparable to open surgery but with the additional benefit of a minimally invasive technique.

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Tumour-related Venous Obstruction: A Saphenous Vein Leiomyosarcoma

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Introduction: Leiomyosarcomas rarely arise in primary veins, especially the great saphenous vein. We have found 28 case reports of leiomyosarcoma arising in the great saphenous vein, the mean age of affected patients ranges from 55 to 60 years. We report the case of greater saphenous vein leiomyosarcoma diagnosed in a 72-year-old man with a history of a mass attached to the left leg and leg pain.

Patients and Methods: The patient is a 72-years old man, overweight (92 Kg BMI 29) and hypertensive.

The symptoms are only leg tension and pain during exercise and a big mass on the medial side of the left leg. We evaluated the patient by Ultrasonography and RM.

Ultrasonography showed a thrombosis of saphenous vein without deep vein thrombosis.

The pulmonary staging was negative.

The first therapeutic approach was LMWH (1x2 s.c./die) x 30 days + mono-collant K1, 60 days later the pain was gone, whereas the mass was bigger than before.

RM showed a mass attached to the left saphenous vein, which conflicted with the thrombus hypothesis.

So we performed an en bloc removal of the mass and a wide resection with free margins.

Results: A pathological examination revealed a mass of 3x6 cm, absence of venous infiltration.

At the cutting structure greyish, with friable margins, witch looks like fish scales. Microscopic Description:

Fusiform smooth muscle cells with eosinophilic cytoplasm.

Positive to hematoxylin-eosin (HE) and vimentin in muscle cells of variable size.

Conclusions: Now after three course of chemotherapy, 28 months after the operation the patient shows bilateral lung metastases, bilateral oedema of legs, recurrent lymphangitis.

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Compression Therapy in Chronic Venous Disease

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Introduction: Venous ulcers may result from damage to the lining of the veins after an occurrence of deep vein thrombosis (DVT). Venous ulcers are found in 1% of the general population, venous ulcers are 7 1⁄2 times more likely to develop in persons older than 65 years. The mainstay of treatment or prevention for venous ulcers remains compression therapy.

Patients and Methods: We evaluated 70 consecutive patient by Ultrasonography.

The inclusion criteria are: age 25–75 y.o. and presence of chronic venous disease.

Exclusion criteria are: diabetes, rheumatoid arthritis, Coagulation Disorders, arterial disease.

The patients were randomized in two groups: in group A the patients underwent to compression with elastic bandage and zinc strip, in group B the patients underwent to compression with Short-stretch stocking.

Results: In group A 25 patient are ameliorated, 9 patients are in the same condition than before, 4 patients are in worse condition than before. In group B 8 patient are ameliorated, 14 patients are in the same condition than before, 13 patients are in worse condition than before.

Conclusions: Elastic bandage and zinc strip compression therapy, despite advances in medical and surgical therapy, continues to be a mainstay in the prophylaxis and treatment of venous disease.

Wrap is an ancient practice but requires appropriate training, skills and experience.

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Deep Venous Thrombosis During Pregnancy: Treatment with Low-Molecular-Weight Heparin

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Introduction: Low-molecular-weight (LMW) heparins have been shown to be at least as effective as unfractionated (UF) heparin in the treatment of deep venous thrombosis (DVT) in non-pregnant subjects. LMW heparins have been shown to be safe when used during pregnancy as they do not cross the placenta. Up to now, they have been used mainly in thromboprophylaxis during pregnancy and rarely in the treatment of acute DVT in pregnant women.

Patients and Methods: In a prospective observational study, we compared the effectiveness and safety of the LMW heparin, dalteparin, with UF heparin in the initial treatment (first week) of DVT during pregnancy. We evaluated 31 consecutive patients after confirmation of DVT by ultrasonography: 10 women were treated with UF heparin (25,430 IU/day, mean) and 21 women with dalteparin (16,000 IU/day, mean) for 7 days and, thereafter, all women were given treatment doses of LMW heparin for another 2 weeks. The dose was then gradually decreased and kept at a high prophylactic dose until delivery.

Results: One patient in the dalteparin group had recurrence of DVT 2 weeks after starting the treatment. No differences were observed between the groups in symptoms or bleeding complications during pregnancy and delivery.

Conclusions: Our results indicate that LMW heparin is as effective and safe as UF heparin for the first week of treatment, but LMW heparin has the advantage of being easily administered and few laboratory controls are required.

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Ethanol vs Foam Sclerotherapy of Peripheral Venous Malformation

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Introduction: Peripheral venous malformation are a subclass of the vascular malformations. The second-line treatment for these lesions is ethanol or foam sclerotherapy. 1% sodium tetradecylsulfate and ethanol 100% are some of the sclerosing agents that have been used. This technique have an high rate of complication and morbidity. Polidocanol have been used in foam sclerotherapy offering a lower rate of complication.

Patients and Methods: We evaluated 10 patients affected by peripheral venous malformation (VMs). VMs are a sub-class of the vascular malformation classified in 1982 by Mulliken, modified in 1993 by Hamburg. All the candidates had the same standard evaluation: first was duplex ultra-sonography, and then MRI in order to investigate the depth of the malformation and tissue involvment, followed by a whole body blood pool scintigraphy. Finally, an additional evaluation for neurologic and cardiopulmonary status was added. 10 sclerotherapy session were performed, 5 of them were treated with ethanol sclerotherapy (Group A) and 5 of them with foam sclerotherapy (Group B).

Results: In group A all the procedures were performed under general anesthesia in the angiographic suite and 1% sodium tetradecylsulfate and ethanol 100%, amount of 2–55 cc were injected. In group B all the lesions were treated with 1% polidocanol foam made up by the Tessari method and used in an average amount of 2.3 mL. Follow up was performed with clinic visits.

Conclusions: In group A was detected an higher rate of complications in terms of treatment-induced intense pain, skin/mucosal necrosis. In group B all patients had improved their QoL substantially with a lower rate of complication. Therefore, the foam sclero-agent seems to be an ideal substitute for ethanol with minimum complications and morbidity.

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Sclerotherapy in the Treatment of Bleeding Varicose Veins

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Introduction: Bleeding is a rare complication of varicose vein disease and in generally emanate from vessels in the base of venous ulcers. We describe a sclerotherapy treatment in patients where bleeding is not associated with bleeding ulceration.

Materials and Methods: From September 2007 to April 2011, we recluted 11 patients (8 female and 3 male; range 25–65 years) who had one or more episode of venous bleeding. Some patients treated their own bleeding with compression, while in the others bleeding points were sutured. In most of the patients minor trauma is the cause of the bleeding.

Results: In all patients where the bleeding site was sutured-ligated it was apparent that healing of the bleeding site was delayed when compared with non sutured veins. Concomitant injection sclerotherapy seems to be a successful method of treating these veins with no recurrent episodes of bleeding.

Conclusion: When bleeding is associated with thin-walled, ectasic veins and not with venous ulcers, following emergency compression treatment injection sclerotherapy provide a rapide, save and effective method of treating the bleeding site and a permanent method of obliterating the thin-walled veins that prevents future bleeding.

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Segmental Lipectomy for Lymphoedema: A Case Report

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Introduction: Lymphoedema results from the excessive accumulation of extracellular fluid in the interstitial compartment due to defective lymphatic function. This particular condition can be origin for a lipomatous neoplasia. This result in more than 100 per cent reduction of excess volume, which is durable and significantly improves quality of life.

Patients and Methods: A 39-year old obese patient (weight 357.1 lb, height 5.58 ft, BMI 56.3) with a giant limb mass had surgery under general anaesthesia; the surgical procedure consisted in a segmental lipectomy. A 39x31x10 cm mass were excised and processed for histological analysis. Hyperplastic lymph nodes were excised too in order to analyse their features. Finally, short stretch bandages were applied to the rest of the limb. After surgery, incisions were left open to drain into the short-stretch bandages. Any need for blood transfusion were recorded.

Results: Histological analysis show a fibrous and lipofibrous neoplasia without significant mitotic activity, associated to vascular angiogenesis and lymphoedema (pseudomyxoid features); furthermore, lymph nodes had adipose tissue, sclerosing angiomatoid stroma and parenchymal atrophy.

Conclusions: Lymphoedema in obese people can upset normal tissue giving rise to a lipofibrous neoplasia involving segmental lymph nodes. A follow-up is needed to recognize as soon as possible a local recurrence.

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Safety and Efficacy of Left Thoracoscopic Robot-Enhanced Thymectomy in Patients with Myastenia Gravis

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Purpose: Thymectomy is a well defined therapeutic option in addition to medical treatment for patients with myasthenia gravis (MG); however controversies still exist about surgical approach, indication and timing for surgery. We reviewed our 9-years experience reporting surgical and neurological results after robot-assisted thoracoscopic thymectomy in MG patients.

Methods: Between 2002 and 2010, 100 patients (74 females and 26 males; median age 37 years) underwent left-sided thoracoscopic thymectomy using the 'da Vinci' robotic system. MGFA classification was adopted for pre- and post-operative evaluation. Preoperative MGFA class was: I in 10%, II in 35%, III in 39% and IV in 16%.

Results: Median operative time was 120 (60–300) minutes. No deaths or intraoperative complications occurred. Postoperative complications were observed in 6 (6%) patients (3 bleeding requiring blood transfusions, 1 chylothorax, 1 fever and 1 myasthenic crisis). Median hospital stay was 3 days (range 2–14 days). Histologic analysis revealed 76 (76%) hyperplasia, 7 (7%) atrophy, 8 (8%) small thymomas and 9 (9%) normal thymus; ectopic thymic tissue was found in 26 (26%) patients. Clinical follow-up on 90 patients with at least 12 months of observation showed a 5-year probability of remission and global improvement of 30.3% and 89.6%. Remission was significantly associated with absence of AbAchR ($p = 0.03$), while a trend to better remission rate was seen in patients with less than 1 year onset of symptoms ($p = 0.16$) and pre-operative I–II MGFA class ($p = 0.13$).

Conclusions: Robot-assisted thoracoscopic thymectomy is a safe and effective procedure. We observed a neurological benefit in a high rate (90%) of patients. A better clinical outcome was obtained in patients with AbAchR negative, short onset of symptoms and early MGFA class.

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Anatomic Segmentectomy for Stage I NSCLC: Safety and Effectiveness

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Objective: Segmental resection as alternative to lobectomy for stage I NSCLC remains controversial. We reviewed our experience evaluating the outcome of anatomic segmentectomy in high risk patients with stage I NSCLC to assess the effectiveness as curative procedure.

Methods: 46 patients with reduced cardio-pulmonary reserve or other significant comorbidities underwent typical segmentectomy between 1999 and 2008. Primary outcome variables were perioperative morbidity and mortality, hospital stay, recurrence patterns, and survival.

Results: There were 39 males and 7 females, median age 72 years. 31 (67.4%) patients received a procedure on the left side and 15 (32.6%) on the right one. 30 (65.2%) patients were in stage IA and 16 (34.8%) in IB. Perioperative mortality was 2.2%, overall morbidity 41.3% (21.7% prolonged air leaks) with a mean hospital stay of 8.8±3 days. At the end of follow-up 22 (47.8%) patients were dead, but only 10 (21.7%) for cancer-related causes. Overall 5-year survival rate was 66%, cancer-related 5-year survival was 77%. Stage IA had a better even if not significant survival than stage IB (69% vs 62%; $p = 0.26$), with a significantly lesser rate of local recurrence (0% vs 12.5%; $p = 0.04$) and less distant relapses (27.6% vs 37.5%; $p = 0.49$). A better but not significant survival

was also observed for tumors of diameter less than 2 cm compared with tumors bigger than 2 cm (5-year survival 75% vs 62%; p = 0.45).

Conclusions: Anatomic segmentectomy is associated with acceptable morbidity and good oncologic results, especially for stage IA compared with stage IB were higher local and distant recurrence rates were observed. Segmentectomy could become an ideal approach especially for patients with stage IA NSCLC and reduced cardio-pulmonary reserve or significant comorbidities.

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Revision of Patellar Tendon Ruptures Using Autologus Gracilis and Semitendinosus Tendon Graft

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Objective: Tendon ruptures are common but in literature there is a lack of papers reguarding re-ruptures of the patellar tendon and how to threat them adequately. With this paper we would like to show the surgical technique and clinical results of a series of 5 patients reconstructed with a semitendinosus and gracilis tendon graft.

Methods: Autologous gracilis and semitendinosus tendons were harvested from their myotendinous junction, leaving their distal insertion intact: their proximal free ends were prepared with a Bunnel-type suture. Then we passed tendons through a 6-mm tunnel made on the patellar bone in a figure-of-8 shape. Finally the distal fixation on the ATT was performed with a transosseous tunnel. Post-operatively we used a full extension brace, non-weight bearing for 45 days. Five patients were treated with this surgical technique. We visited them at a 1 year mean follow up and assessed the clinical results with IKDC and Lysholm scales. All patients underwent a weight bearing RX to study the position of the patella.

Results: Patients obtained a good range of motion, quadricep strength was comparable with the controlateral leg, there was no limp. Good scores were obtained at the evaluation scales. Rx of the knee showed good patellar position.

Conclusion: Complete ruptures of the patellar tendon always represent a challenge for the surgeon. A correct and prompt diagnosis, an adequate planning of the operation, and the following related rehabilitative protocol represent the turning points for a positive result.

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Radical Salvage Surgery for T4 Advanced Primary Colorectal Cancer: A Hope for Cure after a Multidisciplinary Approach

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Until 50 years ago, colorectal cancer infiltrating surrounding organs was considered unresectable. Modern extensive surgical procedures and the improvement of reconstructive technique had made possible radical multivisceral resection. After curative resection, the local recurrence rate is reported to be around 11% with a overall 5-years survival rate of 48%.

Methods: We report a case of a 56 years old man with a T4 locally advanced obstructed rectum-sigmoid junction cancer. He underwent emergency decompressive colostomy and neoadjuvant chemotherapy. After two lines of chemotherapy he showed local progression with increased infiltration of prostate and bladder. No distant metastases were detected at restaging. A total pelvectomy with terminal colostomy and definitive Bricker ureter-ileo-cutaneous-stoma was performed. Patient was discharged on 15 th day p.o. At the latest follow up the patient was alive and disease free.

Conclusion: Multivisceral resection is technically demanding but in experienced centres is a valid treatment option for locally advanced colorectal cancer, It has to be considered in fit patients both as primary step or after chemoradiation since prolonged survival can be obtained.

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The Cheek-Eyelid Junction Crease. From Anatomy to Medical and Surgical Correction

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Objective: The cheek-eyelid junction crease is an unsightly condition usually thought to be the effect of a hyperpigmentation or of a hollow. This is actually a set of anatomical features that give the eye a tired and aged look. The aim of this study was to investigate the anatomy of this region and to identify all possible correction techniques basing on the type of deformity.

Methods: A cadaver dissection study has been performed on eyelid and malar regions, both by layers and by sections, to identify all the anatomical structures involved in the genesis of the cheek-eyelid crease.

Results: All the tissue layers of the eyelid-cheek region contribute to the pathogenesis of the tear trough: the malar bone with its age-related retraction, the insertion of orbital septum on the arcus marginalis, the prominence of the fat bags, the dif-

ferent insertions of the medial and lateral part of the orbicularis muscle, ptosis or loss of subcutaneous fat and SOOF, the transition between the eyelid and malar skin.

Conclusions: Basing on the results of the anatomic study we can identify the appropriate technique to correct the tear trough in each case. Camouflage can hide hyperpigmentation; hyaluronic acid and fat grafting can fill the under eye hollow; fat bags removal eliminate the shadow; finally the midface lift restores the position of the malar soft tissues.

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Cranioalloplasty. Which Material?

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Objective: Cranioplasty has always been an operation in which neurosurgeons and plastic surgeons were compared. The availability of safer materials allows to choose more often implants than autologous reconstruction. The aim of this paper is to illustrate the characteristics of the several materials, and to propose recommendations for their use.

Methods: Three cranioalloplasty materials were analyzed basing on the literature and clinical experience: porous polyethylene, hydroxyapatite and methyl methacrylate. Of all the three implants the advantages and disadvantages in terms of strength, moldability, and biocompatibility were described.

Results: All the analyzed materials can be modeled intraoperatively or customized basing on the data from CT scan. The hydroxyapatite is solid but not very moldable and is therefore only useful in customized implants; porous polyethylene is well modeled and trimmed if warmed, but it is more deformable, as well as methyl methacrylate.

Conclusions: All the proposed implants were safe and effective. Regardless of the material used, we believe it is basically a perfect planning of and preparation of an adequate scalp coverage, even with a preliminar tissue expansion.

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Mature Mediastinal Cystic Teratoma Complicated with Intapulmonary Rupture: A Differential Diagnostic Problem

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Objective: Mature cystic mediastinal teratomas are rare neoplasms whose rupture into adjacent structures, such as the lung, is an unusual condition of difficult diagnostic management.

Methods: We present the case of a 55-year-old woman come to our attention complaining chest pain and fever. A CT-scan showed a disomogeneous lesion at the medial portion of the left upper lobe of the lung. Lung abscess developed over bronchiectasis and drained in the mediastinum or a lung cancer-abscess were the main differential diagnostic hypothesis. Moderate 18F-FDG up-take at the PET scan, normal blood profile and cancer markers were not helpful in the diagnostic pathway. A CT-guided biopsy was performed twice to obtain a histological diagnosis of the lesion, but It was not significant. In the suspicion of a malignant lesion, the patient underwent a left minithoracotomy which showed a mediastinal cystic lesion strongly adherent to the mediastinal pleura and the upper lung lobe. The large extension of the mass and its pleuroparenchimal infiltration required its en-bloc resection with a portion of the upper left lobe.

Results: Histopathological analysis revealed a mature cystic mediastinal teratoma ruptured into the adjacent lung. Post-operative course was uncomplicated, and the patient was discharged after seven days.

Conclusions: Mature cystic teratomas of the mediastinum are rare tumors which rarely rupture into the adjacent structures raising a differential diagnostic question. Surgery is often mandatory to obtain diagnosis and treatment in the same time.

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Impiego Degli Ultrasuoni in Chirurgia Tiroidea

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Objective: During the last few years, various devices were introduced to do a safe section and hemostasis of thyroidal vessels. The Harmonic Scalpel is an ultrasonic surgical shear that using high-frequency mechanical energy to enable simultaneous vessel and tissue coagulation at the same time. We conducted a prospective randomized study to compare the outcome of total thyroidectomy using the Harmonic Scalpel (HS) versus standard clamp and tie (CT) knot-tying (KT) procedure in terms of safety, surgical

time, overall drainage volume, perioperative complications, hospital stay.

Methods: Between January 2008 and December 2010, 200 patients (130 women, 70 men; mean age 36 years) undergoing thyroidectomy were randomized into two groups: group A, where CT and KT technique were used, and group B, where the HS (Focus) was used.

Results: There was no significant differences between the two groups in terms of age, gender, indication for thyroidectomy, thyroid gland weight and diameter, pathologic diagnosis, preoperative and postoperative serum calcium levels, postoperative complications and reoperative thyroid surgery. In group B there is a statistically significant reduction of the operative times (63+/–9' vs 85+/–15', $P < 0.001$), overall drainage volume (50+/–20cc vs 70+/–25cc, $P < 0.001$).

Conclusion: The Harmonic Scalpel is safe, effective, useful, and time-saving alternative to the traditional suture ligation technique for thyroid surgery. They simplified total thyroidectomy, eliminating the need for clamp-and-tie maneuvers while achieving efficient hemostasis. Our results show that utilization of this device in total thyroidectomy reduced significantly the operative time and blood loss.

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Preliminary Study on Transthoracic Ultrasound for the Detection of Pleural Adhesions

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Policlinico S.Orsola, Malpighi

Objective: Preoperative detection of pleural adherences can be very useful for the assessment of surgical approach, considering them the main VAT contraindication. No other method showed good sensivity and specificity. The aim of this study was to assess the accuracy of transthoracic ultrasound in the detection of pleural adherences prior to thoracic surgery.

Methods: From February 2010 to October 2010, 70 consecutive patients (M: 49; F: 22; age range: 37–81, mean age: 59) undergoing surgical thoracic intervention (except for pneumothorax) have been preoperatively scanned by two different operators. We created a nine-regions topographic map, according to thoracic wall projections of lung segments, in base of which every pulmonary area has been scanned looking for the presence or the absence of 'gliding sign'. During operations the surgeon, blinded to the prediction, confirmed or excluded each suspected adherence or documented other adherences not previously identified.

Results: Ultrasound results have been confirmed in 58 (83%), partially confirmed in 4 (5,7%) and disconfirmed in 8 (11,3%) cases. Considering those partially confirmed as discomfirmed, sensitivity and specificity were 88% and 97% respectively. Positive predictive value was 79,6%; negative predictive value is 98%.

Conclusions: Transthoracic ultrasound can be effective method to predict pleural adherences before thoracic surgery in experienced hands. Its safeness, feasibility and cheapness make it an useful method for the planning of minimally invasive surgical interventions.

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A Case of Giant Zenker Diverticulum Treated by Right Cervicotomy

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Objective: Treatment of Zenker diverticula can be endoscopic or surgical: for those of huge dimensions, surgical intervention is mandatory. It consists in diverticulectomy and miotomy; the access and the operative technique is well described by left cervicotomy. We report our experience about the exeresis of a Giant Zenker Diverticulum with a right cervical approach.

Methods: A 76 year old female came to our attention with high grade disphagia and 12 kg lost during previous year. Her past medical history included a cervical esophageal diverticulum, diagnosed 25 years before, and never treated. Preoperative examinations showed a giant Zenker Diverticulum, with an almost complete right intrathoracic extension.

Results: Due to its dimensions and to its right extension, to obtain a better control of the diverticulum and to avoid lesions of right pleura, adherent to the diverticular sac, we approached it by a right cervicotomy. Diverticular sac extended inside the thoracic inlet, with associated esophageal counterclockwise rotation. After mobilization, diverticulectomy and miotomy were performed as in the left approach, with no immediate or delayed complications.

Conclusions: To the best of our knowledge this is the first case of diverticulectomy and esophageal miotomy approached with success via right lateral cervicotomy. One year after surgery the patient complained no more disphagia and gained 5 kg.

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Patellar Fracture after Medial Patello-Femoral Ligament Reconstruction: Report of Two Cases

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Patellar dislocation is a relatively common problem in young and active patients. Conservative treatment has been proposed after the first episode. In case of recurrent dislocation surgical treatment is mandatory. Medial patello-femoral ligament (MPFL) reconstruction has been described after the crucial role of this structure has been demonstrated. In fact it is the principal medial

stabilizer and it is always affected after patellar dislocation. Several surgical variations of the initial technique have been proposed.

Regardless the technique adopted, mpfl reconstruction results in dramatic improvement in knee function, subjective satisfaction and patellar stability. However precise surgical technique is required to avoid complications. Most common problems are tunnel position errors, and graft tensioning errors. Correct graft tension is difficult to assess and reproduce since up to date no reliable protocol has been proposed. Graft over tensioning results in increased compressive forces on patello-femoral cartilage and late cartilage damage; graft slackness results in persistent subluxation or recurrence of dislocation. Femoral tunnel positioning is crucial to restore the isometric behaviour of the ligament. The correct site should be slightly posterior and proximal to the medial epicondyle. A tunnel that is too proximal or too posterior leads to over tension of the ligament whereas an anterior tunnel results in a slack ligament. We report the complications occurred in our series of 58 mpfl reconstruction performed with two 5mm patellar tunnels and 7mm half tunnel on the femur. 6 patients at the latest FU were not satisfied with their results. 4 claimed with persistent anterior knee pain although the referred no episodes of instability. The last two patients suffered a patellar fracture. In the first case a transverse fracture occurred in a 45 years old female 5 months after surgery while descending stairs. This complication was treated with two cannulated screws and extension bracing. In the second case, a fracture of the superior pole of the patella occurred in a 23 years old man 2 months after surgery. It was treated with a non reabsorbable cerclage and extension bracing. Patellar fracture is a described complication after mpfl reconstruction. In our patients it was due to poor surgical technique; in the first case the two parallel tunnels on the patella were too close; while in the second patient the proximal tunnel was too close to the superior pole of the patella. Thus we believe a minimum bony bridge of 10 to 12 mm must be left between the two tunnels and the proximal and distal tunnels should be at a minimum distance to the respective poles of 12mm.

Precise surgical technique is required to avoid complications related to tunnel placement of both femoral and patellar tunnels. X-ray fluoroscopy should be considered at least in case of small patients.

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Role of Splenectomy in Thalassemia Patients Undergoing Hematopoietic Stem Cell Transplantation

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Background: Currently, the only cure for beta-thalassemia is allogeneic stem cell transplantation (SCT). Massive splenomegaly is frequently found in patients in a higher class risk group (class 3). Splenectomy is indicated if there splenic infarction, or symptomatic hypersplenism. We reviewed our experience with splenectomy prior to SCT in patients with thalassemia.

Methods: Fifteen patients underwent splenectomy from May 2005 to April 2010; all were prepared for surgery by preoperative blood transfusion to achieve a haemoglobin level of over 9.5 g/dL. All received appropriate immunizations. The mean and median ages were 8 years, respectively (4–16). Mean operative time was 75 minutes (range 60–100). Average postoperative hospitalization time was 5.7 days (range 5–7). Minimum spleen weight was 495 grams and maximum 2397 grams.

Results: The median time (range) to reach granulocyte counts of 0.5 and 1.0 × 109/L among splenectomised patients was 18 (14–41) days. The corresponding time points for patients without splenectomy were 25 (20–28) days. Platelet counts of at least 20 × 109/L were reached at 23 (15–71) days. Among splenectomised patients, there was one death from transplantation-related causes (chronic lung graft versus host disease). Two patients had EBV reactivation with a high viral load which resolved after specific treatment. One patient developed a lung fungal infection which resolved with antifungal therapy.

Conclusion: The predominant indications for splenectomy were recurrent acute splenic sequestration and increased transfusion demand in thalassaemics patients. Here we reported that splenectomy prior to an allogeneic SCT in thalassemia patients is associated with faster engraftment without a significantly increased risk of death from peri-transplant infections. While a larger study is warranted, it appears that pre- transplant splenectomy for thalassemia major is not associated with an averse impact of EFS and OS.

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Rectus Sheat Hematoma: Are there Prognostic Risk Factors that may Address the Early Operative Treatment?

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Background: Rectus sheat hematoma (RSH) is a condition caused by hemorrage into the rectus sheat caused by damage to the superior or inferior epigastric arteries or their branches or by direct damage to the rectus muscle. Treatment is mostly supportive but in any cases comparing hemodinamyc compromising treatment may be so late to determine the patient's death. We performed a retrospective study on patients with RSH in order to identify possible prognostic risk factors that can address the operational approach before the onset of hemodynamic instability.

Materials: Seventy-eight patients admitted to the general surgery unit and diagnosed as RSH between January 2000 and

December 2010. Demographic characteristics, patients history, laboratory and imaging studies were investigated. The variables considered were: gender, age, anty-coagulant therapy trauma, related diseases, INR, bleeding time in the first 72 hours of observation. The data were used for statistical analysis.

Results: Fifty-nine (mean age 69.9 years) received a conservative treatment; eighteen (mean age 79.2 years) underwent operative treatment for hemodynamic instability (embolization in 2 patients and surgery in 16 patients); 3/18 died (17%) for consumption coagulopathy after surgery. None of the variables included in univariate analysis was statistically significant (p = n.s.).

Conclusion: Ultrasound or CT of the abdomen and pelvis are the most common methods used to establish the diagnosis of RSH so it's no longer a diagnostic 'dilemma'. Conservative non interventional approach is followed by most and the operative treatment is justified only in case of hemodynamic instability. Our retrospective study doesn't identify prognostic risk factors that might lead to early operative treatment that advances the hemodynamic instability therefore we believe that only close observation of the patients with RSH and 'common sense' can prevent a fatal outcome.

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Achilles Tendon Surgical Revision with Synthetic Augmentation

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Surgical treatment is the recommended therapeutic choice in patients with acute rupture of the Achilles tendon. Augmentation procedures are usually reserved for patients with re-rupture of the tendon or in patients with chronic ruptures. This paper is about a patient who had been operated on for a revision of an Achilles tendon rupture with a Ligastic® synthetic graft.

A 50-year-old patient experienced an atraumatic rupture of his right Achilles tendon in 1995 and underwent surgical repair with an open end-to-end tenorrhaphy with plantaris tendon augmentation. One month later he experienced a re-rupture of the Achilles tendon and underwent a surgical procedure using Ligastic® augmentation.

In December 2006 the patient presented to our attention because of the progressive increase in volume of a small, painless, elastic swelling in the calcanear area and the impossibility to wear any type of shoe. Range of motion (ROM) of the ankle was complete and the Thompson test was negative. MRI showed a large cyst bordering the tendon and widely infiltrating its internal part. The patient underwent yet another surgical procedure. We removed the hyperplastic tissue from the surrounding fibrous-like tissue. A histological analysis showed a cystic lesion with the absence of inflammatory infiltrate in the context of the connective fibrous tissue. At a 12-month follow-up, the patient reported a satisfactory return to his functional and working activities. The Thompson test was negative.

Synthetic augmentation grafts could offer a strong and effective solution for patients with re-rupture or chronic rupture of the Achilles tendon. However, despite some reported satisfactory clinical and biomechanical results, the case report described above shows that there is a risk of a foreign-body response by the immune system with the use of Ligastic® graft in Achilles tendon repair.

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Bone Tunnel Enlargement after Anterior Cruciate Ligament (ACL) Reconstruction

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The mechanism of bone tunnel enlargement following anterior cruciate ligament (ACL) reconstruction is not yet clearly understood. Many authors hypothesized that aggressive rehabilitation protocols may be a potential factor for bone tunnel enlargement, especially in reconstructions performed with hamstrings autograft. The purpose of this study was to evaluate the effect of a brace free rehabilitation on the tunnel enlargement after ACL reconstruction using doubled semitendinosus and gracilis tendons: our hypothesis was that early post operative knee motion increase the diameters of the tibial and femoral bone tunnels.

Forty-five consecutive patients undergoing ACL reconstruction for chronic ACL deficiency were selected. All patients were operated by the same surgeon. The patients were randomly assigned to enter the control group (group A, standard post operative rehabilitation) and the study group (group B, brace free accelerated rehabilitation). A CT scan was used to exactly determine the diameters of both femoral and tibial tunnels at various levels of lateral femoral condyle and proximal tibia, using a previously described method. Measurements were done by an independent radiologist in a blinded fashion the day after the operation and at a mean follow-up of ten months (range 9–11). Statistical analysis was performed using paired t-test. The mean femoral tunnel diameter increased significantly from 9.04±0.05 mm (post op) to 9.30±0.8 mm (follow-up) in group A and from 9.04±0.03 mm to 9.94±1.12 mm in group B. The mean tibial tunnel diameter increased significantly from 9.03±0.04 mm to 10.01±0.80 mm in group A and from 9.04±0.03 mm to 10.60±0.78 mm in group B. The increase in femoral and tunnel diameters observed in the study group was significantly higher than that observed in the control group.

Our results suggest that bone tunnel enlargement after ACL reconstruction using hamstrings autograft can be increased by an accelerated, brace free, rehabilitation protocol.

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Surgical Treatment of Patellar Tendon Rupture

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In literature there is a lack of papers with significant number of patients surgically treated for patellar tendon rupture because of its rarity. As far as we know, this is the first case report on the outcome of a patient surgically treated for a revision of a revision of a patellar tendon rupture. A 27-year-old professional martial arts athlete experienced recurrent right knee patellar tendon rupture on three occasions. He underwent two operations for complete patellar tendon rupture: an end-to-end tenorrhaphy the first time, and with a Bone-Patellar-Tendon (BPT) allograft the second time. After the third episode, he was referred to our Department where we performed a surgical reconstruction with the use of hamstrings pro-patellar tendon, in a figure-of-eight configuration, followed by a careful rehabilitation protocol. Clinical and radiological follow-ups were realized at 1, 3, 6 months and 1 and 2 years post-op with an accurate physical examination, the use of recognized international outcome scores, and with radiograph and MRI studies. At final follow-up the Visual Analog Scale was 2; active range of motion was complete in both flexion and extension; a 3 cm hypotrophy of the quadriceps muscle was found. Tegner score was 5 and Lysholm was 84; regarding the IKDC scoring scale, the patient entered group B. Radiograph images showed a satisfactory height of the patellar bone; The MRIs showed distinct progressive homogeneous improvement of the reconstructed tendon, and no signs of inflammation were detected. At final follow-up the patient reported a satisfactory feeling regarding the surgical procedure performed.

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Tibial Stress Fracture after Computer-Navigated Total Knee Arthroplasty

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A correct alignment of the tibial and femoral component is one of the most important factors in favourable long-term results of a total knee arthroplasty (TKA). The accuracy provided by the use of the computer navigation systems has been widely described in the Literature so that their use has become increasingly popular in the last years.

However unpredictable complications, such as stress femoral or tibial fractures, have been reported after a few weeks from the operation

We present a case of a stress tibial fracture occurred after a TKA performed with the use of a computer navigation system. The stress fracture, which eventually healed without further complications, occurred in the fourth post-operative week at one of the pin-hole sites used for the placement of the tibial trackers. The insertion of such pins can significantly decrease the breaking stress of the bone locally and in the surrounding area. There is a positive correlation among screw holes in bone and the residual weakness of the bone to afford bending loads and torsional stresses. This is even more true in the case in which bicortical pins are used since their penetration in the tubular bone occurs in a 'transcortical' way, or when several attempts are performed to obtain a perfect stability of the pin.

In summary, we recommended particular attention so as to perform a unique insertion of the pins in an orthogonal way, reaching the distal cortical bone without completely penetrating it; this should provide an adequate stability of the trackers, reducing the risk of loss of strength of local tibial bone.

Moreover, patients with concomitant diseases (rheumatoid arthritis, osteoporosis, tibiofemoral malalignment) or who are receiving concomitant drug treatment (such as corticosteroids) should be kept under particular control and, if necessary, undergo a slower post-operative rehabilitation protocol.

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Dorsal Pancreatectomy an Alternative to the Total Pancreatectomy. Report of Two Cases and Literature Rewiew

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Background: Dorsal pancreatectomy is a segmental pancreatic resection, through an anatomical cleavage plane, used to preserve functioning pancreatic tissue, with the aim of avoiding biliary and gastrointestinal reconstruction.

Case Series: We report the clinical cases of two patients submitted to total dorsal pancreatectomy. The first patient was a 71 years-old female affected by IPMN (Intraductal Papillary Mucinous Neoplasm) and a 35 years-old female affected by SPT (Solid Pseudopapillary Tumor). In both cases, the excision of the entire dorsal pancreas was performed with preservation of the biliary duct, the spleen and the gastroduodenal artery, without postoperative complications. In the IPMN case was resected a small liver metastasis thereafter the patient underwent to adjuvant CT and died 30 months after surgery, for liver recurrence, with exocrine insufficiency but without diabetes. The patient with SPT is still alive, 5 years after surgery, in absence of diabetes an exocrine impairment.

Literature Review: The literature reported 3 cases of dorsal pancreatectomy and two cases of partial dorsal pancreatectomy, 3 females (71, 59, 51 years-old) and 2 male (45 years-old). Four patients affected by IPMN an one patient by two small islet cell tumors of the anterior segment of pancreatic head. Insulin – dependent diabetes did not develop in 3 patients without exocrine

pancreatic impairment, while in two cases nor endocrine neither exocrine insufficiency occurred.

Conclusion: Both personal and literature cases confirm that dorsal pancreatectomy, for benign or low malignant neoplasms involving the dorsal pancreas, is technically feasible and safe, because it is less demolitive than total pancreatectomy, the only alternative to this operation.

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Usefullness of Contrast-Enhanced Intraoperative Ultrasonography in Colorectal Liver Metastases after Preoperative Chemotherapy

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Background: Hepatic resection is the only treatment offering a chance of long-term survival for patients with colorectal liver metastases (CRLM). Preoperative chemotherapy improves survival and resectability but reduces accuracy of preoperative staging due to reduction of size or disappearing of the metastases and due to chemotherapy induced liver steatosis. Intraoperative Ultrasonography (IOUS) is considered the standard method of intraoperative staging. Contrast-enhanced intraoperative ultrasonography (CE-IOUS), using second generation contrast agents (SonoVue, Bracco-Imaging, Milan, Italy), seems to improve detection of liver metastases after preoperative chemotherapy.

Aim: The aim of this study is to evaluate the ability of CE-IOUS in detecting metastases in patients with CRLM during hepatectomy after preoperative chemotherapy.

Methods: From 01/01/2011 to 30/06/2011 23 patients with CRLM, after preoperative chemotherapy, underwent IOUS and CE-IOUS using SonoVue during hepatectomy. These findings was compared with preoperative staging imaging, performed with contrast-enhanced ultrasonography (CE-US), CT and/or MRI.

Results: Preoperative staging imaging detected a total of 40 metastatic lesions. IOUS detected 19 newly metastatic lesions in 7 out 23 (30,4%) patients for a total of 58 lesions (+47,5%). IOUS + CE-IOUS detected 6 more new lesions in 9 out 23 (39,1%) patients for a total of 63 (+10,2%). All these newly detected lesions were removed by an additional hepatectomy and histopathologically diagnosed as a metastases.

Conclusion: In patients who undergo surgery for CRLM, CE-IOUS improves the sensitivity of IOUS to detect liver metastases enhancing the rate of treatment with curative intent.

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ICGR15RR a New Index to Predict Postoperative Morbidity in Patients Undergoing Hepatectomy

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Background: Postoperative hepatic liver failure (PHLF) is one of the most serious and often fatal complications after partial hepatic resection. The reported incidence of PHLF ranges between 1.2 and 32%. Several methods have been tested for they ability to predict post-operative hepatic dysfunction including Child-Pugh score, volumetric assessment of the liver remnant, plasma elimination of Indocyanine Green (ICGR15).

Aim: The aim of this study is to analyse the usefulness of the ICG test and CT volumetry in predicting postoperative mortality and morbidity after hepatectomy in patients with injured liver.

Methods: Data on ICG-test (performed with LiMON, Pulsion Medical System, Munchen, Germany) and Liver Resection Rate (calculated by CT Volumetry) were collected for thirty patients, with primary and secondary liver malignancies underwent hepatectomy from 01/01/2011 to 30/05/2011. These findings was analysed and compared with postoperative mortality and morbidity.

Results: A total of 30 patients underwent major or minor hepatectomy during the study period: 14 with HCC in chronic liver disease, 6 with cholangiocarcinoma and cholestasis and 10 with colorectal liver metastasis after preoperative chemotherapy. Mortality was 0% and morbility was 33.3%, 10 developed postoperative ascites and weight gain. Mean preoperative IGG R15 was 8.1 ±7, mean CT volume resection rate was 34% ± 24%, mean combined ICG R15 and CT volume resection rate index (ICG R15 RR) was 2.6 ± 2.9. ROC curve analysis identified that the most predicting factor for postoperative mobidity was the combine index ICGR15RR compare with ICRR15 and CT volume resection rate with values of 0.85, 0.68 and 0.74, respectively. We identified an optimal cut-off value for ICGR15RR of 4.0 for predicting the occurrence of postoperative complications. For patients with IGCR15RR lower than 4.0 the morbidity was 21% compared to 66% for patients with ICGR15RR greater than 4.0, ($p = 0.03$).

Conclusion: The preliminary data of this study identified a new index useful to predict postoperative morbidity for patients undergoing hepatectomy with injured liver.

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Evaluation of Short and Long-Term Surgical Results in Otosclerosis

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Introduction: There have been several surgical approaches to otosclerosis over the years, but the techniques that proved to be the most efficient were stapedectomy and stapedotomy.

Objectives: To analyze which of the two surgical procedures allows to achieve better short- and long-term results.

Materials and Methods: An homogeneous selected sample of audiometric data of 50 patients (average age 37±8 years), all affected by the second stage of otosclerosis, undergone either stapedectomy or stapedotomy between 1985 and 1990 at the Otosurgery Department, University of Naples 'Federico II', was analyzed. All patients were divided into two groups: group 1 (n = 25) operated by stapedectomy; group 2 (n = 25) operated by stapedotomy. Pre-operative, initial (after 1 month follow-up) and late post-operative pure tone average (PTA) of Air Conduction (AC), Bone Conduction (BC) and Air-Bone Gap (ABG) were calculated in four frequency ranges: study 1 (0.5, 1, 2 kHz); study 2 (0.25, 0.5, 1, 2, 4 kHz); study 3 (0.25, 0.5, 1 kHz); study 4 (2, 4 kHz).

We analyzed and compared between the two surgical techniques:

1. Pre- and initial post-operative difference in PTA-ABG, assessed in terms of percentage of recovery of auditory function (% recovery);
2. Initial and late post-operative difference in PTA-ABG (2a), PTA-AC (2b), PTA-BC (2c).

For statistical purposes we used the χ^2 test ($p < 0.05$) with 3 degrees of freedom.

Results:

1. Short-term results: equal efficacy of both techniques in attaining the results, in all four studies, with a slight, no statistically significant, advantage of the stapedotomy in achieving excellent results (% recovery > 67%).
2. Long-term results:
   - good stability of the overall results obtained by the two surgical techniques, with a slight superiority, no statistically significant, in stapedotomy, that produces better results in all frequency ranges analyzed (2a).
   - better preservation of hearing, both in terms of transmission (2b) and perception (2c), in patients undergoing stapedotomy: this difference between the two approaches is minimum in the study 3 (low frequencies) and reached the statistical significance when we considered the high frequencies.

Conclusion: These results show that both techniques provide satisfactory and stable long-term results, but stapedotomy allows to obtain better and more stable results, especially at high frequencies, due to its lower surgical aggressivity.

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New Technique to Improve Haemostasis in Stapled Haemorroidopexis

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Objective: Bleeding rate after Stapled haemorroidopexys varies from 1.8% to 9.1%, and intra-operative bleeding are even more common (18.9–60%). In order to reduce this complication and the related hospitalization as well, we considered a new application based on the bioabsorbable staple-line reinforcement device called SeamGuard (WL Gore & Associates, Flagstaff, AZ, USA).

Methods: From September to December 2009 we treated according to Longo's technique 100 patients affected by symptomatic II-III grade Haemorrhoidal disease. We divided them in two groups: patients treated using PPH-01 and SeamGuard reinforcement (Group A) or only PPH-03 (Group B). All patients have been evaluated after 15, 45 and 90 days after surgery.

Results: Patients were randomly assigned to the two study arms (50 cases each). The two groups were homogeneous in regard of sex, age and grade of haemorrhoidal disease. Group A presented a lower intraoperative bleeding rate (4% Vs 42%), less haemostatic steatches placement, lower post-operative pain (after 6 and 24 hours) and post- operative bleeding (0% Vs 6%).

Conclusions: Bioabsorbable anastomotic line reinforcement with SeamGuard allows a better control of intra operative, post operative bleeding and pain, improving safety especially in a day surgery setting.

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Closed Laparostomy using Bioabsorbable Mesh to Prevent Abdominal Compartment Syndrome due to Colorectal Perforation Peritonitis

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Objective: Laparostomy is frequently performed in the surgical therapy of mechanical obstruction, peritonitis, or trauma to prevent abdominal compartment syndrome.

In cases of peritonitis due to intestinal perforation without an expecting of an abdominal re-exploration is possible to perform a closed laparostomy to avoid abdominal compartment syndrome.

Methods: From October 2009 to January 2010 we treated with closed laparostomy, using a reabsorbable synthetic mesh (BioA mesh, W.L. Gore & Associates, Flagstaff, AZ, USA,) all patients with peritonitis due to intestinal perforation. The severity of the peritonitis was evaluated by the Mannheim Peritonitis

Index. In the follow-up patients were evaluated 1, 3 weeks and 1, 3, 6 and 12 months after the discharging.

Results: We treated 5 patients, 3 male, 2 female, mean age 57 yrs, BMI 29. The mean Mannheim Peritonitis Index was 22 (range 16–35). In all cases there were a massive visceral edema with colonic and midgut distension that increase the risk of abdominal compartment syndrome if the abdomen was closed. Patients were discharged after a mean hospitalization of 9 days.

No major complications, including incisional hernia, appeared in all patients at six-month office visit and in 4 patients after one year of follow-up.

Conclusions: Our experience shows that closed laparostomy is a safety and effectiveness technique to close abdominal incision in those cases where a compartment syndrome is suspected.

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Total Laparoscopic Hartmann Reversal

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Objective: Reversal of Hartmann procedure (HR) is still considered a major surgical procedure, with an high morbidity (55–60%) and mortality rate (0–4%) and an anastomotic leak rate of up to 16%.

In order to reduce these complications, we introduced an original technique to perform a totally laparoscopic reversal of Hartmann procedure (LHR).

Methods: From June 2004 to June 2010 we performed 27 LHR. Patients were 16 (59%) male and 11 (41%) female, with a median age of 58 years (range 41–84), a mean BMI of 24 Kg/m^2, ASA score II-III. All patients were preoperatively evaluated with trans-stoma colonscopy to confirm the absence of proximal disease. The integrity of the rectal pouch was assessed with water-soluble rectal contrast radiography and rectoscopy in all cases.

Results: In all cases the procedure was performed laparoscopically without conversion. The mean operative time was 96 minutes. There weren't major intraoperative complications. Bowel movement occurred in a mean time of 38 hours (range 23–72). In the postoperative period one patient (3.7%) had an anastomotic leak that required the performing of ileostomy, another one patient (3.7%) had needed a blood transfusion. One man (3.7%) had a severe nosocomial pneumonia.

The mean postoperative hospitalization was 5.7 days. In a one year follow-up only one patient was readmitted due to presence of postincisional hernia in the side of previous stoma.

Conclusions: LHR is a feasible and safe procedure and a valid alternative to open restoration of bowel continuity.

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STARR with CCS-30 for Treatment of Obstruited Defecation Syndrome in One-day Surgery: Safety, Feasability and Our Preliminary Experience

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Objective: Stapled Transanal Rectal Resection -STARR- with CCS-30 is a surgical procedure that traditionally requires 2.6 days of hospitalization to manage potentially life-threatening complications such as hemorrhage, suture line dehiscence and urinary retention.

After a preliminary approach to STARR followed by 2 days of recovery, we supposed that a one day hospitalization couldn't increase the risk of delayed complications.

Methods: From June 2007 to June 2010, in our institution, we performed STARR with CCS-30 in 152 patients affected by rectal prolapse with recto-rectal or recto-anal intussusception; 48 of these (under 75 years old, with ASA clas s I–II or with BMI under) were discharged after 24 hours.

Pre-operative Wexner test, cinedefecography RX or MR and ano-rectal manometry (ARM) were performed to evaluate symptoms, pelvic floor kinetics and muscular function.

Some patients affected by incontinence of the external anal sphincter, increased threshold stimulus evoked and abdominal-pelvic dyssynergia underwent pre-operative rehabilitation.

Results: Our one-day surgery experience from June 2009 to June 2010 includes 48 cases, 47 female and 1 male, mean age 52 yrs, mean BMI 24.2 kg/m^2, mean operative time 41 minutes. Intraoperative blood-loss was minimal. No serious intraoperative complications occurred. Other complications, without necessity of readmission, were: mild perineal haematoma (6 cases), tenesmus (8 cases), urgency (4 cases), anismus (5 cases).

Conclusions: Our results demonstrate that STARR with CCS-30 is safe and effective when performed in one night hospitalization if carried out by skillful centers on selected patients.

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Effectiveness of Topical Application of Glycerine Trinitrate 0.4% Ointment to Reduce Ano-Rectal Spasm Related Pain after Stapled Haemorrhoidopexy

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Objective: The aetiology of chronic pain following stapled haemorrhoidopexy is various and often not clear. In some cases the pain is related to the presence of the internal anal sphincter

and/or puborectalis muscle spasm. The use of glycerin trinitrate (GTN) ointment is already well known in the treatment of the pain related to the presence of anal fissure to its smooth muscle relaxant action. The pharmacological properties of GTN led us to hypothesize its use in the treatment of anorectal spasm after stapled haemorrhoidopexy.

Methods: From January 2004 to September 2010 we performed 480 stapled haemorrhoidopexis with Longo's technique. Postoperative pain occurred in 131 (28%) patients and in 41 of these the pain is related to ano-rectal spasm. We divided this 41 patients in two groups, using GTN 0.4% ointment or using Lidocaine cloridrate 2.5% gel to treat the pain. Pain intensity was evaluated with Visual Analogue Scale (VAS) after 2 and 14 days and an anorectal manometry was performed after 14 days.

Results: In group treated with GTN ointment the pain severity after 2 and 14 days was statistically lower than other group (2.48 Vs 4.05 and 0.43 Vs 1.45) and also anorectal manometry showed a sensible reduction of the anal resting pressure in this patients (75.4 Vs 85.6 mmHg).

Conclusions: Our study showed that topical use of GTN 0.4% ointment can reduce muscular spasm and its related chronic pain following stapled haemorrhoidopexy.

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Common Bile Duct Stones Treatment by Trancystic Approach: Original Technique and Preliminar Experience

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Objective: The incidence of unsuspected common bile duct stones (CBDS) in patients with cholelithiasis is 4–5%, whereas the incidence of CBDS is 5–10%. We developed an original method to obtain clearance of CBD identified during elective laparoscopic cholecystectomy (LC).

Methods: Between January 2008 and September 2010, in 53 patients who had a clinical history of cholestatic liver enzymes rise or previous jaundice episodes and preoperative negative abdominal US or MR cholangiography for CBDS, during traditional LC, was performed intraoperative cholangiography (IOC). If a CBDS was revealed, the cholangiocatheter was removed and a 0.35-inch floppy tip guide wire was inserted through the papilla into the duodenum. A 6-Fr 40 mm angioplasty balloon was advanced over the guide-wire into the papilla and was used to dilate the papilla (30–60 seconds at 4 atm). Then the balloon was deflated and the stones were flushed into the duodenum with saline pressure washing.

Results: CBDS were detected in 25 patients (15 male, 10 female), mean age 56 years, median BMI 29.5. In 23 cases it's been possible to clean up the CBD, in one patient we didn't found any stone evidence and in the case left the presence of more than one stone suggest us to perform a postoperative ERCP. We had no major postoperative complications and a mean hospitalization of 2.2 days.

Conclusions: In our experience stone clearance rate is 96%, however the success of the procedure is related to stone's size, that must be no bigger than the balloon's diameter (6mm).

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Polypropylene Mesh vs PTFE in Treatment of Open Inguinal Hernias

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Objective: Prosthetic reconstruction for inguinal hernia repair is very useful to reduce recurrence rate but the major complication is chronic pain related to foreign body chronic inflammatory reactions.

The development of new prosthetic materials allows the decrease of chronic pain (from 30% to 3%) and foreign body sensation (43.8%). To evaluate possible advantages related to the use of PTFE mesh in inguinal hernioplasty, we performed a RCT comparing traditional Polypropylene prosthesis with PTFE Infinit® Mesh (WL Gore).

Methods: We divided patients in two groups: in group A we performed Lichtenstein hernioplasty using PTFE, in group B using polypropylene mesh. Post-operative pain was evaluated with VAS after 24 and 72 hours, 7, 14 days and 1, 3, 6 months. Prosthesis shrinkage was evaluated after 14 days with US.

Results: From September 2009 to February 2010, we enrolled 73 patients (19 female, 54 male), median age 55, mean BMI 28,2 and ASA score I and II. The two groups were homogeneous. Mean operative time was about 38 minutes. The whole patients were treated in Day Surgery setting and discharged 6–8 hours after the procedure.

Post-operative pain after 24 and 72 hours was lower in patients treated with PTFE mesh.

The same results have been noticed after 7, 14 days, 1, 3, 6 months (0.2–0.8 Vs 0.6–1.2).

At US Polypropylene mesh showed greater reduction of its surface and greater thickness of periprosthetic tissue than PTFE.

Conclusions: PTFE mesh for inguinal hernia repair is related to a significant reduction of post-operative chronic pain.

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Is the Preservation of Inferior Mesenteric Artery Performing Left Hemicolectomy for Diverticular Disease a Real Advantage?

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Objective: Ligation of the inferior mesenteric artery (IMA) during sigmoid colectomy may cause sympathetic denervation of the rectal stump. The purpose of our study was to investigate the functional results after sigmoid resection for diverticular disease following ligation or preservation of the IMA.

Methods: We prospectively analysed 98 patients (45 female and 53 male, age 38–91 years, median age 63 years) with diverticular disease. Sigmoid colectomy with preservation of the IMA was performed in 57 patients, and ligation of the IMA with sigmoidectomy was carried out in 41 patients. Bowel function follow-up was performed by use of questionnaires: the Jorge–Wexner continence scale and the Wexner-Agachan Constipation Score, 6 and 12 months after surgery. The quality of life was measured by SF-36 questionnaire.

Results: After sigmoid colectomy with division of the IMA, patients presented with a higher rate of fecal incontinence and/or increased constipation compared with patients after sigmoid resection with preservation of the IMA. Deterioration of QoL was also observed in patients with ligated IMA.

Conclusions: In patient with diverticular disease preservation of the IMA during sigmoid colectomy lowers the frequency of postoperative impaired anorectal function, representing a real benefit and not only a technical challenge.

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A New Algorithm for the Reconstruction of the Lower Eyelid after Oncological Demolition Based on Functional Subunits

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The orbito-palpebral region represents the most frequently involved area by skin tumors, particularly by basocellular carcinomas (BBCs). The lower eyelid is the predominantly affected subunit, followed by the internal canthus. In these areas the excision margins not always follow the guidelines as in other facial regions, due to more aggressive and infiltrative behavior of cancers. The selection of reconstructive technique is primarily guided by the size of the resultant tissue defect and is aimed at the restoration of anatomical structures and the physiology of the subunit. Aesthetic outcome always represents an important goal to achieve but is secondary to function. To properly reconstruct the orbito-palpebral region, we adopted a reconstructive algorithm based on functional, rather than aesthetic, subunits. Selection of reconstructive technique is guided by the need to accurately re-establish the eyelid lamellar structure, preserving or recreating the natural medial and lateral vectors of tension. In this paper we introduce the concept of functional inferior eyelid subunits, analyze the reconstructive algorithm, discuss surgical treatments, outcomes and the clinical course in the management of cancers in the orbito-palpebral region resulting from a close teamwork with ophthalmologists.

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Preoperative Portal Vein Thrombosis Does Not Influence Morbidity and Mortality After Liver Transplantation

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Introduction: Portal vein thrombosis is a well recognized complication of chronic liver disease with a prevalence ranging from 1% to 16% of patients.

Materials and Methods: A retrospective review of 447 consecutive patients who underwent liver transplantation LT between October 2000 and December 2010 was performed, and 48 recipients with PVT were compared with 399 recipients without PVT. The aim of this study is to determine the impact of pre-existing PVT on the surgical procedure, to identify specific preventable perioperative complications, and based on our and others studies, to determine whether this group of patients are acceptable candidates for LT.

Results: Of the 48 patients with PVT, 44 had partial thrombosis and 4 complete thrombosis. In all cases, the tromboendovenectomy. There were 6 cases of anastomosis at confluence of the SMV and 1 case with venous graft interposition. When compared with the control group, in the pre-operative characteristics, PVT patients were older at the time of transplantation ($P = 0.003$) and the use of TIPS was higher ($P = 0.009$). In the operative characteristics, the warm ischemia time was higher in PVT group (47.2±23 min vs 39.3±15; $P = 0.04$), as RBC transfusion (1889±1833.5 cc vs 1387±1354.6; $P = 0.03$). In post-operative evolution, the ICU stay was longer in PVT group (5.8±11.7 days vs 3.6±3.9; $P = 0.02$). However, there were no differences in the rate of the complications. The overall survival at 5 years was similar (67.8% vs 68.6%; $P = 0.9$).

Conclusion: PVT is associated with greater operative complexity, but has no influence on postoperative complication and overall survival.

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Disfigured? No, Thanks!

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Primary mammary reconstruction – in one step with radical mastectomy – is a challenge but also the first reaching aim for a plastic surgeon. This goal seems to become quite impossible but with harvesting an autologous flap or a free flap to perform the one step procedure.

The AA present their early experience with 'STRATTICE', a new regenerate porcine dermal template, used in three patients affected by monolateral mammary carcinoma.

A 'N.A.C – sparing mastectomy' was performed in all patients with small or medium mammary volume, followed by the introduction of a silicon bio-dimensional anatomic prosthesis in a precreated undermined space between the major pectoral muscle superiorly, and the STRATTICE template inferiorly.

A very short period of follow-up – three months – has shown optimal aesthetic results and a very good acceptance by the patients.

Primary mammary reconstruction in one step with radical mastectomy represents nowadays the gold standard, solving rapidly all patient's psychological and clinical problems, reducing the sanitary costs, the hospitalization and the waiting list of surgery.

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Recurrent Primary Osteosarcoma of the Left Atrium Involving the Right Pulmonary Veins Treated by Atrial Resection and Trans-Sternal Right Pneumonectomy

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Objective: Primary osteosarcoma of the heart is extremely rare. We report a case of a young patient underwent a complex reoperation for the recurrent osteosarcoma of left atrium involving the right lung.

Methods: The patient was a 40-year-old men operated 20 month before for a left atrial mass suggesting for a mixoma. The pathological examination documented a heart osteosarcoma. After the operation chemoterapy was done. Nevertheless he suffered of local recurrence of the malignancy. Tumor diameter was 90x65x35mm involving both right-pulmonary veins and a large portion of the left-atrium. Extensive preoperative evaluation was performed. Nodal involvement or metastases were excluded.

Results: The patient underwent surgery through a re-sternotomy and aortic-bicaval cardiopulmonary by-pass. The left-atrium was incised and the tumors was removed en-bloc with a large cuff of left-atrium, interatrial septum and the right lung due to extensive infiltration of both the pulmonary veins. The left atrium and the interatrial septum were reconstructed with bovine pericardium. The post-operative period was uneventful. Chemotherapy followed surgery. After 6-month follow-up the patient have no signs of tumor recurrence.

Conclusions: Only few cases of primary cardiac osteosarcoma have been reported in literature and recurrence of the disease is the major cause of death. In selected patients reoperation can be attempted in case of local cardiac recurrence. In this case we were able to perform a radical resection. The patient is still alive and free from recurrence. A careful preoperative evaluation is mandatory to select patient in which the reoperation should be performed with a radical intent.

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The Endoleaks after Endovascular Repair of Infrarenal Abdominal Aortic Aneurysm: Our Experience

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Objective: The endovascular aneurysm repair (EVAR) for infrarenal aortic aneurysms is considered a valid therapeutic option for conventional open repair. The endoleaks represent the most common complication after EVAR and are defined as persistent blood flow in the aneurysm sac outside the graft. The aim of this study is describe the our experience about management of endoleaks after EVAR.

Methods: From January 2002 to September 2010, 44 EVAR procedures were performed at our Center. In 11 cases aortic sidebranches embolization with microcoils were performed before EVAR. Median follow-up was 6 years and the patients were examined with periodic duplex and CT scan.

Results: Technical success rate was 81,8%. In 6 cases (13,6%) we observed 2 type IA and 4 type II endoleaks. The type IA endoleaks were treated with 1 aortic extender cuff and 1 open surgical conversion. In one case of type II endoleak, arising from a lumbar artery, selective microcoils embolization of a branch of left hypogastric artery was performed. In the other cases of type II endoleaks were are preferred a nonsurgical management and the following controls were confirmed their spontaneously resolution.

Conclusions: Our experience confirme that the endoleaks are considered 'The Achilles' hell' of EVAR. There is general agreement that type I and III endoleaks required immediate treatment. However, no consensus exists regarding the necessity of treatment of type II endoleaks. New technologies are necessary to evaluate a correct surveillance of patients undergoing EVAR and to development noninvasive procedures of continuous measurement of aneurysm sac pressure.

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Comparison of Laparoscopic vs Open Cholecystectomy in Elderly Patients: Experience of a Surgical Unit

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Background and Objective: In this study, we investigated whether laparoscopic cholecystectomy, is advantageous in elderly patients compared to the open approach, in the treatment of symptomatic cholelitiasis and for the management of acute cholecystitis.

Methods: Data from 105 consecutive geriatric patients who underwent laparoscopic or open cholecystectomy in the last two year were collected. The patients were separated into 2 groups: patients > 75 years of age (group A) and patients < 75 years of age (group B). Comparison between the groups was made considering many variables. The impacts of age, on type of procedure, LOS, complications were assessed.

Results: We performed, over the 24 months of the study, 69 VLC vs 36 open cholecystectomy (OC). The mean ages and the proportions of patient over 75 y.o. were 73.3 years and 34.8 % for LC and 76 years and 50 % for OC. Advancing age, males and acute inflammation were more frequently associated with OC as well as longer LOS, and more post-operative complications. In 4 (5.5 %) patients conversion into open cholecystectomy was done. There were 2 lethal outcomes in the OC group. The overall morbidity rates were similar in the emergency and elective groups, and there was no significant difference in the rates of major complications.

Conclusion: We believe that in elderly patients, laparoscopic surgery can be applied safely without further increasing the surgical risks. The complications can be minimized by carefully selecting the patients aged 80 or older and by experienced teams with high technical capabilities operating on such patients. Since OC was a predictor of resource use and complications, strategies to complete earlier LC and prevent complications are required for octogenarians.

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Robot-aided Thoracoscopic Thymectomy for Early Stage Thymoma

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Background: Minimally invasive thymectomy for stage I–II thymoma has been suggested in the last years and considered technically sound; however due to lack of data on long term results, controversies still exist on surgical access indication. We sought to evaluate the short and long term results after robot-assisted thoracoscopic thymectomy in early stage thymoma.

Methods: Data were prospectively collected from between 2002 and march 2011, 14 patients (4 males and 10 females, median age 53 years) with Masaoka stage I (n = 5, 35,7%), II (n = 9, 64,3%) were operated on by left-sided robotic thoracoscopic approach. 5 (35,7%) patients had myasthenia gravis associated.

Results: All resections were R0. Median operative time was 139 minutes (range 70–185). One patient needed cervicotomy to complete thymectomy. No intraoperative or postoperative vascular and nervous injuries were recorded, no perioperative mortality occurred. 2 (0,14%) patients had postoperative complications (one atrial fibrillation and a case of haemothorax treated with chest drain). Median hospital stay was 3 days (2–9). WHO histology was 2 A, 4 AB, 3 B1, 3 B2 and 2 B3. Postoperative radiation therapy was administered in 6 cases. At a median follow up of 26 months 13 patients are alive and 1 died for leukemia. All patients with myasthenia gravis improved after surgery.

Conclusions: Our data indicates that robot-enhanced thoracoscopic thymectomy for early stage thymoma is a technically strong and safe procedure with low complication rate and short hospital stay. Oncological outcome seems good, but prospective randomized trials are needed for comparison with transternal approach.

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Surgical Stabilization of Traumatic Flail Chest: Our Experience and Literature Review

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Background: Flail chest is a serious injury that occurs as a result of fracture of three or more ribs from at least two places or sternal fractures and/or separation of costochondral junctions. Traditionally, management was non operative. The aim of this study is to present our experience and to assess with a literature review indications, controversies, and technical challenges in surgical stabilization of traumatic flail chest.

Methods: We present two consecutive case of flail chest associated to haemothorax, treated by chest wall stabilization. Both patients were over 65 y.o. and had flail chest consequently to blunt chest trauma associated to other traumatic lesions. Surgical stabilization of the chest wall was performed with a Titanium Fixation System (Synthes, West Chester, Pa) consisting of titanium plates and self-tapping unlock screws support and a dual mesh patch used to avoid direct contact between prosthesis and lung parenchyma.

Results: In both patients the chest wall reconstruction with thoracotomy and toilette consent rapid discharge without complications and the flail chest was successfully stabilized. There was no postoperative mortality. Post-operative data showed a good preservation of respiratory function.

Conclusion: Surgical stabilization of chest wall is associated with a faster ventilator wean, shorter ICU time, less hospital cost, and recovery of pulmonary function in a select group of patients with flail chest. Rib fracture repair is technically challenging. Several effective repair systems have been developed. Data from our experience, even if consisting of few cases, support the practical utility of this system of rib reconstruction also in the emergency setting.

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A Case of a Giant Paraesophageal Type IV Hiatus Hernia Presenting as an Emergency

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Paraesophageal hiatal hernia accounts for only five per cent of all diaphragmatic defects but is a potentially dangerous lesion. Herniation of the entire stomach, at times accompanied by the omentum, transverse colon, and small bowel, may occur in some patients, and incarceration and strangulation may be the result. We report the case of a 82 y.o woman who underwent repair of large paraesophageal hernias, in emergency. The patients presented to the local Emergency Department with symptoms of fever, dispnea and signs of myocardial ischemia. She complained also from many months epigastric pain, bloating, and dyspepsia. Her medical history included chronic ipertensive cardiomiopaty and BPCO. On chest radiography signs of diaphragmatic hernia were present and spiral computed tomography showed a large hiatus hernia with complete herniation and volvolus of the stomach, and traslocation in the thorax also of the transverse colon and ileus, with dislocation and compression of the heart and of the lungs. The operations through a left thoracotomy, necessary to excise the large hernia sac, which was densely adherent to the lung and mediastinal structures included reduction of the hernia and repair of the hiatal defect. The clinical features of large paraesophageal hernias containing intrathoracic abdominal viscera, as well as the technique of operative repair, are presented. The question of operation approach (thoracotomy or laparotomy) is a matter of continuous discussion, each of them having its advocates.

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Diaphragmatic Relaxatio in the Adult Patient, Combined Toracotomic and Video Laparoscopic Surgical Treatment

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Objective: Diaphragmatic relaxatio is the permanent elevation of an hemidiaframma without interruption or alteration of the muscle insertions. In adults this condition is usually due to paralysis of the phrenic nerve with subsequent atrophy of muscle fibers and gradual replacement of them with fibrous connective tissue, that is not contractile. The indication for surgical treatment is reserved for those with significant cardio-respiratory or digestive disorders. The surgical technique most frequently used is the diaphragmatic plication, with possible overlap of non-absorbable implants.

Methods: A man of 39 years, obese, came to our observation for exertional dyspnea and left chest pain for about two years, arising as a result of chest trauma sport, with worsening of the clinical picture during the last month. The chest radiograph showed left hemidiaphragm lifting with contralateral mediastinal shift; thoraco-abdominal CT scan showed compression of part of the broncho-parenchymal structures of the basal segments of the left lower lobe and displacement of the stomach, left colon and their vascular structures in the chest. Pre-operatively the patient had a predominantly restrictive ventilatory deficit of remarkable degree.

Results: The patient underwent surgical diaphragmatic plication by left thoracotomy, and combined with laparoscopic approach. The first laparoscopic access showed no evidence of adhesions between the viscera located in the chest and diaphragm; subsequently was made a left thoracotomy at the sixth intercostal space with the finding of the lower lobe atelectasy and paradoxical movement of the diaphragm during the breathing. This led to a transverse plication, narrowed in two-layer diaphragm with non-absorbable thread. After closing the thoracic access, a further laparoscopic check was performed with a low pressure pneumoperitoneum (8 mmHg), to check the resilience of the diaphragmatic plication and to separate small portions of incarcerated omentum in the suture. The post-operative chest radiographs showed lowering left hemidiaphragm with parenchymal improvement. The patient reported a marked improvement in respiratory symptoms.

Conclusion: We believe that the combination of two accesses, chest and abdomen (laparoscopic), in the surgical treatment of diaphragmatic relaxatio gives the advantage of greater security during the packaging of plastic. This technique allows you to check in advance the presence of viscero-peritoneal adhesions, and then verify that the diaphragmatic suture, performed on a tissue significantly thinner, has not involved accidentally transposed abdominal viscera into the thorax.

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Can Axillary Lymph Node Dissection be Safely Omitted When Micrometastasis Occur in Early Breast Cancer?

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Background: The introduction of Sentinel Lymph Node Biopsy (SLNB) gives the chance to stage with minimally invasive tecnique and accuracy axillary lymph node status. Nowadays the most of tumours are diagnosed when very small and the chance to find axillary node metastasis is extremely low. Application of SLNB deeply reduces the global costs and the rate of surgical complications related to complete axillary lymph node dissection (CALND). The most of sentinel nodes are diagnosed as positive or negative for macrometastasis, but there is a group of nodes containing micrometastasis (MM) or even isolated tumour cells (ITC). Although these lesions are considered as expression of minimal invasive axillary disease, their prognostic significance is still controversial.

Matherials and Methods: We have retrospectively examined the histopathological features of 724 patients affected by breast cancer cT1 – T2 ≤ 3 cm cN0, from January 2000 to March 2011 in our Department treated with lumpectomy, quadrantectomy or mastectomy. All 724 patients have received a SLNB. 434 have been treated with CALND, whereas 290 have been only treated with SLNB. Each node has been bisectioned, stained with ematossilin and eosin, and in cases of diagnostic doubt, when atypical cells were detected cytokeratins were used. Patients presenting MM or ITC has been treated with CALND as well as patients with macrometastasis in SLNB. Different pathological features have been examined for these group of patients: tumour size, histotype, grading, lymphatic vessel infiltration, age at diagnosis. Moreover biological parameters have been taken into account such as estrogen and progesteron receptors status, Ki67 labeling index, HER2/neu expression.

Results: The analysis of our data shows that of 724 SLNB, 203 patients had SN positive (28%). Of 203 SNs +, 150 were positive for macrometastasis, 49 were positive for micrometastasis, 4 were positive for ITC at IHC staining. After complete axillary dissection the percentage of Non Sentinel Nodes positive was 56% (84 pts) for macrometastasis, 4.5% (2 pts) for micrometastasis, 0% for ITC. Non sentinel node positive were found in micrometastatic sentinel nodes only in two cases (one multicentic and one T2 high grade). Overall survival and disease free survival were 100% in median 5 years follow-up.

Conclusion: According to our experience and to the most recent worldwide consensus conferences we can confirm that complete axillary node dissection can be safely omitted when micrometastasis occur in sentinel node biopsy in early breast cancer.

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Refinements during and after DIEP Flap Modelling

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Nowadays DIEP flap is considered part of the cultural background of every plastic surgeons who deals with breast reconstruction.

For this reason, a good knowledge of the surgical technique, together with a particular attention to aesthetical refinements is fundamental.

To reach this goal, two surgical times are indispensable: the intra and post operatory modelling.

During the intra operatory modelling some crucial points are: inframammary fold position, projection, volume and ptosis, and also contra lateral symmetry.

The postoperative modelling includes: lateral and medial new breast refinements (it is often necessary to reduce the volume laterally, using liposuction or v-y local flaps), nipple reconstruction, scar revision or lipofilling.

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Critical Issues and New Perspectives in the Diagnosis and Treatment of Gastrointestinal Stromal Tumors (GIST)

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Because of the well-known oncogenic origin and rapid spread of innovative molecular-target therapies, GISTs represent a paradigmatic model of multimodal treatment of tumoral disease. The rapid succession of new discoveries in molecular biology (gene mutations and their implications for cell receptors with subsequent activation of signaling pathways), prognostic factors (risk stratification systems), pharmacology (use of TKI in adjuvant and neoadjuvant settings, emergence of secondary resistance to TKI) have revolutionized the treatment of this disease. Despite considerable progress in treating this disease, many dark sides have yet to be revealed. Given these rapid advances, it is imperative for the surgeon, in collaboration with oncologists, radiologists and pathologists, to master the major aspects of diagnosis and multidisciplinary management of this cancer. This review is intended to cover the most salient findings in the field of GIST, with particular attention to the role of surgery, supplemented by the use of molecular targeted drugs in the adjuvant and neoadjuvant settings, and to focus attention on the hot topics currently under investigation.

Keywords: GIST – Molecular targets – oncologic surgery – adjuvant therapy – neoadjuvant therapy – Mutation-guided therapy

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Titrated Safe Extubation as Alternative to Temporary Tracheostomy in Post-Thyroidectomy Acute Respiratory Failure

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Background: The post-thyroidectomy acute respiratory failure (ARF) is correlated to the palsy of recurrent nerve or to the periglottic or vocal cords edema due to surgical manipulations. ARF occurs in 3% of thyroid surgery patients(1). In these cases it is need to place a tracheostomy (TS)(2) or a less invasive management. TS is recomanded to manage the airways in patients (pts) who requires prolonged intubation (>9 days) in ICU. Moreover TS could increase risk of infections and prolonge patient ICU stay. The titrated safe extubation (TSE) has been reported as a new approach in case of iatrogenic upper airways obstruction. TSE is used in airway management for critical illness, it consists in replacing the orotracheal tube with a cuffless small-size nasotracheal one. As the TS, the TSE allows rapid stabilization of the airways, but in a less invasive way. The aim of our study is to check the efficacy of TSE in post-thyroidectomy ARF.

Materials and Method: From Janaury 2005 to Janaury 2010, 1136 thyroid surgery pts have been treated in our University Hospital, 8 of these were admitted in our ICU for ARF. Symptoms were tirage, hypoxemia and dyspnea that required re-intubation and ICU recovery for post-operative ARF diagnosis. Safe extubations with fiberbronchoscopy (FBS) and topic anesthesia were performed within 24 hours. After removing the fiberbronchoscope, a nosetracheal uncuffed tube (I.D.4,5mm) (NT) was fed in trachea on guidewire, and it was left with a phonetic valve, resolving airway obstruction. During TSE inspiration occurred throught the NT while exalation happened outside it, allowing spontaneous breathing. A nasogastric tube was placed for enteral nutrition and a corticosteroid aerosol-therapy was administred.

Results: None of these pts has undergone TS. We checked airways condition every 48h. The small diameter of NT together with the therapy enabled the progressive reduction of the inflammatory oedema, with fast recovery from airway obstruction. All pts were finally extubated between the 4th and the 8th post-operative day.

Conclusion: In our initial experience, NT resulted safe and well tolerated without complications related to the procedure. It seems to be a less invasive alternative than TS in transitory airway obstruction management, avoiding prolonged orotracheal intubation with sedation, and reducing ICU stay. However it will be validated by a further multicentric study.

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Perioperative and Long-term Outcome after Surgical Treatment of Hilar Cholangiocarcinoma: Results of an Italian Multicenter Analysis of 440 Patients

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The objective of this Italian multicenter study was to analyse the early- and late-results after surgical treatment of patients with hilar cholangiocarcinoma (HC).

Between 1992 and 2007, 440 patients resected for HC in 17 italian surgical units were collected.

Symptomless jaundice was the most common clinical presentation (70%; 304 patients). Biliary stricture was classified according to the Bismuth-Corlette classification as type 1 in 36 patients (8.2%); type 2 in 80 patients (18.2%); type 3 in 304 patients (69.1%); type 4 in 20 patients (4.5%). Preoperative biliary drainage was performed in 294 patients (67%) and morbidity rate among them was

22%. 37 of 172 right hepatectomies ± extended, underwent preoperative right portal vein embolization. Main biliary confluence excision associated with major hepatectomy was performed in 376 patients (85.4%), with R0 resection rate of 79.2%. Caudate lobe resection was associated in 293 patients (78%). Postoperative mortality rate was 8.6% (38 patients) and regarded only liver resection. Morbidity rate was 47.5% (191 patients). Five-year overall survival rate after liver resection was 26.6% which was significantly higher after R0 resection (32.0%; $p < 0.001$) and in N0 patients (34.7%; $p < 0.001$).

R1 resection and lymphnode metastases were independent poor prognostic factors. Liver resection significantly increased rate of R0 resections.

Because of high perioperative risk, the demanding operative management of this tumor should be performed in tertiary referral surgical centers.

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Intranodal Palisaded Myofibroblastoma (IPM): A Case Report

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Objective: Intranodal palisaded myofibroblastoma (IPM) also called as intranodal hemorrhagic spindle cell tumor with amianthoid fiber is a rare benign tumour of the lymphnode that may be derived from myofibroblasts or smooth muscle cells. The most usual area of presentation as the inguinal lymph nodes, approximately 53 such cases have been reported in the literature.

Methods: A 35-year-old female patient presented with a slowly growing lump in his right groin. She mentioned that he first noticed the swelling one year ago. There were no symptoms associated with it. In physical examination, a solitary, painless, mobile, firm mass was determined in the right inguinal region. She had no other significant findings in physical examination or clinical work-up.

Results: The lesion was excised for diagnostic purposes. The specimen consisted of a well circumscribed mass measuring 2 cm in diameter. Its cut surface was reddish, nodular and firm. Representative sections of the specimen revealed a lymph node almost enterely replaced by a proliferation of spindle cells strongly, immunohistochemically were positive for cyclin D1 and smooth muscle actin, vimentin, weakly positive for CD 34 and negative for S-100 protein.

Conclusions: In this clinical setting, the morphology of the tumor along with its immunohistochemical findings were characteristic for an intranodal palisaded myofibroblastoma. IPM is a rare benign lesion. In the literature, there were only two cases with local reccurence. Metastases have not been reported until today. The simple surgical resection is curative.

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Laparoscopic Technique in the Treatment of Incisional Hernia: Our Experience

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Objective: Since 1930 when the laparoscopic incisional hernia's repair came first, it has become large and spread in its use. The treatment without prothesis was subjected to a relapse rate up to the 50%, while it has been reduced to a range from 3% to 18% with the prothesis.

Methods: Between May 2004 and December 2010 we underwent 82 patients to laparoscopic surgery for the treatment of incisional hernia, 44 females (53.6%) and 38 males (46.4%).

Results: The patients' average age was 59 years old while the hospital stay 3.3 days (range 1–12). The prothesis' sizes applied were from 10x15 cm and 30x20 cm.

At the beginning of our experience for the prothesis fixing we used not reabsorb systems but then we passed to complete reabsorb ones. We've noticed 7 seromas. Only one patient underwent a second surgery during the hospitalization for a hemoperitoneum which required the prothesis removal. During the follow up we observed a long term relapse in one patient, who has been operated the first time in the 2007 and then in the 2009 always in a minimally invasive way.

Conclusions: The laparoscopic technique for the incisional hernia treatment is a safe method which offers excellent results both for the aesthetic and for the comfort of the patient. To obtain a good result it's necessary a standardized technique (viscerolysis, measurement and prosthesis fitting) carried out by surgeons with a good experience in minimally invasive laparoscopic surgery.

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Primary Adenocarcinoma of Third Portion of Duodenum: A Case Report

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We report a case of primary adenocercinoma of third portion of duodenum. An 80 years old woman presented with a six months history of dyspepsia, anorexia, weight loss of 12 kg and recurrent epigastric pain. An esophagogastroduodenoscopy showed a hiatal hernia with gastroesophageal reflux disease, gastrectasia with much gastric residue, without narrowing of the lumen of duodenum. An abdominal computed tomography showed an important gastric dilatation associated with the dilatation of the first portion of duodenum. A short suspect segment of narrowing was visible at the junction of the third of the duodenum on the right of the mesenteric axis. Intraoperatively, we identified a solid substenotic area of the third portion of duodenum without any significant

lymphoadenopathy intrabdominally. We performed a segmental duodenectomy of third and fourth portion of duodenum; a manual, side-to-side duodenojejunostomy was performed and the common bile duct closed with a T-tube drainage. Postoperatively she developed delayed gastric emptying which resolved spontaneously after two week. Histological examination revealed a moderately differentiated primary adenocarcinoma of duodenum with extension to the adipose tissue without involvement of local lymph node. The patient remains alive, well and clinically free of tumour one year following surgery. In conclusion an aggressive approach to the diagnosis and early surgical intervention in patients with adenocarcinoma of the third or fourth portion of duodenum is clearly indicated. Segmental duodenectomy can be considered the procedure of choice for this lesion.

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Transfer of Inguinal Flap to Neck: Experimental Model on 7 Rats Albinos

A. Fontanarosa, A. Fonzone

Objective: Transfer of inguinal flap to neck can be used to cover traumatic hands, scabs, stumps of amputation, free flap. Objective of this study is to demonstrate that transfert of inguinal flap to neck is a good experimental model for initiation in microsurgery.

Methods: 7 rats, optic microscope, microsurgical instruments, surgical threads 11.0 and 9.0 are been utilized. Surgical procedure can be devised in three phases:

1. Flap dissection: four skin incision are achieved without cutting epigastrics vessels. Dissection of femoral vessels and binding of collaterals.
2. Receiving site preparation: Dissection of external jugular vein and internal carotid. Positioning of clamp double and arthrotomy of carotid. Return to site of withdrawal; positioning of Ikuta's clamp in the distal part of femoral vessels. Binding and cutting of femoral vessels and transfer of flap
3. Realization of vascular anastomosis: realization of anastomosis termino lateral between carotid and femoral artery and after permeability evaluation of anastomosis and jugular preparation, execution of anastomosis termino lateral between femoral vein and jugular.

Different phases are timed.

Results: It's possible observe a reduction of surgical times (from 70 min. to 50 min. for flap dissection; from 53 min. to 40 min. for arterial anastomosis; from 59 to 45 min for venous anastomosis). All arterial anastomosis are resulted permeable. Last venous anastomosis is resulted permeable at perioperative control. Technical errors can explain lack of permeability of six venous anastomosis: missing points (rats n°1,2,3); transfixed point (rat n°4); irregular distribution of points and intraluminal wire (rat n°5); intraluminal flap (rat n°6).

Conclusions: This technique is difficult. Reduction of surgical times and permeability of last anastomosis demonstrate improvement in microsurgery.

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Minimally Invasive Cervical Foraminotomy for Treatment of Cervical Radiculopathy

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Object: Cervical radiculopathy can be caused by either soft herniated disc or foraminal degenerative stenosis. Anterior or posterior surgical surgical approaches have been described to decompress the nerve root. The authors present preliminary results on a series of patients treated with minimally invasive microscopic technique for posterior foraminotomy.

Methods: 9 patients were selected according to clinical and radiological findings. All of them were admitted with cervical radicular symptoms and signs related to the MRI-documented vertebral level of the lesion. None of them presented mielopathy. The duration of symptoms was more than 6 months. The mean age at the time of surgery was 46, 4 yo (range 40–59 years). Foraminotomy was performed at one level in all cases (with one exception of a two levels decompression), with minimally invasive technique supported by the use of microscope. The mean length of hospitalization was 2,5 days. The post-operative follow-up period ranged from 6 months to 4 years (mean 2 years) with serial clinical evaluation and radiological imaging for the evolution of sagittal alignement.

Results: All the patients had a good postoperative outcome. No surgical complication was observed in the short and long period. All of the patients described an immediate significant improvement of radicular symtpoms with minimal neck discomfort. At a six months follow up the improvement was confirmed with no recurrence of pain. The cervical X-Ray at six months showed a correct sagittal alignement in all of the cases.

Conclusions: cervical minimally invasive foraminotomy is a safe and effective technique to treat radiculopathy in selected patients. The advantages of this technique include less postoperative discomfort for the patient, short post-surgery recovery and hospitalization if compared to traditional approach. We need more data to describe a reduction of surgical complications.

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Surgical Lasers Er:YAG and Nd:YAG-Applications in Oral Surgery-Clinical Cases

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Objective: Presenting clinical cases which required surgical procedures in oral area, treated with surgical lasers Er:YAG and Nd:YAG: operculectomy, apicectomy, gingivectomy/plasty, closed curettage, frenectomy, alveolotomy.

Methods: Fotona Fidelis III Laser (Er:YAG and Nd:YAG) was used to treat 6 different clinical situations that needed oral surgical interventions. Er:YAG Laser is able to cut bone, hard and soft dental tissue and Nd:YAG Laser is used to sterilize and coag-

ulate the wound. Each of this cases required one or both lasers, following a specific protocol, in order to achieve the best results. The treatments were performed in a specialised private practice, in Constanta, Romania, between January 2010–April 2011.

Results: Fotona Fidelis III laser provide a better healling by reducing the number of postoperatory simptoms (swelling, pain, bleeding septic complications). Compare to scalpel incisions, lasers do not generate scares on oral mucosa, even if the healling is a little longer. It is a conservatory method, preserving more structurally healthy tissue, avoiding collateral damage, ensuring maximum confort levels. Some of the procedures need longer time than the classic ones – this might represent a disadvantage in laser therapy.

Conclusions: Lasers represent a modern and really helpful instrument for oral surgeons, dentists and for patients, also.

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Three Cases of Synchronous Lung and Liver Nodules

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Background: The concurrent presentation of pulmonary and hepatic nodules at CT is usually considered highly suggestive for lung tumor with liver metastasis. We present three cases in which differential diagnosis represents a challenge.

Cases Report: A 65-year-old man with history of prostatic cancer presented with synchronous onset of a lung nodule and a liver nodule. The pulmonary lesion showed hypercaptation at PET-CT, while the hepatic nodule was negative and therefore considered benign. When patient was admitted for lung surgery, his coagulation profile resulted impaired. Investigation with a percutaneous liver biopsy revealed hepatocellular carcinoma and cirrhosis. Upper right lung lobectomy was performed with diagnosis of squamos cell carcinoma of the lung (T3 N1). Then the liver nodule was treated with percutaneous thermoablation.

A 73-year-old patient that presented with a single pulmonary nodule associated with multiple hepatic lesions. A typical carcinoid was diagnosed with a broncoscopic biopsy. PET-DOTATOC showed hypercaptation of both lung and liver lesions. For this reason a multimodality treatment was planned: debulking surgery followed by radiometabolic treatment. The patient underewent to liver resection (left hepatectomy, wedge resections and thermoablations in the right hemiliver) and now he's listed for lung surgery.

In the third case, the patient had a history of lung resection for bronchioloalveolar carcinoma (T1 N0) and transverse colectomy extended to distal gastrectomy and jejunal resection for adenocarcinoma of the large bowel (T3 N0 G2). Follow-up PET-CT showed hypercaptation of mediastinal nodes and of a liver nodule. A mediastinoscopy and a percutaneous liver cytology were performed; they both demonstrated the pulmonary origin of the lesions.

Conclusions: In case of simultaneous presence of lung and liver lesions, diagnosis can't never be taken for granted. It's necessary to investigate extensively every single case in order to avoid mistakes.

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Refinements during and after DIEP Flap Modelling

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Nowadays DIEP flap is considered part of the cultural background of every plastic surgeons who deals with breast reconstruction.

For this reason, a good knowledge of the surgical technique, together with a particular attention to aesthetical refinements is fundamental.

To reach this goal, two surgical times are indispensable: the intra and post operatory modelling.

During the intra operatory modelling some crucial points are: inframammary fold position, projection, volume and ptosis, and also contra lateral symmetry.

The postoperative modelling includes: lateral and medial new breast refinements (it is often necessary to reduce the volume laterally, using liposuction or v-y local flaps), nipple reconstruction, scar revision or lipofilling.

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Conservative vs. Surgical Treatment for Chronic Anal Idiopatic Fissure: A Prospective Randomized Trial

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Aim: Anal fissure is a common anal disease mainly occurring in constipated patients: it produces pain and bleeding with bowel movements. Most anal fissures heal within a few weeks improving constipation, but some fissures may become chronic: it is debated if a medical or surgical treatment is needed.

Methods: 142 consecutive patients with chronic anal fissure were prospectively evaluated. They were randomly assigned to two different groups: a) conservative treatment (anal dilator + nifedipine ointment) (4 weeks) b) surgical treatment (lateral internal sphincterotomy).

The two groups were similar for age, male/female ratio, symptoms and manometric preoperative values. Results were evaluated after the sixth postoperative week or beginning of medical treatment. The minimum follow-up was 6 months.

Results: 74 patients underwent conservative treatment (CT), 68 surgery (LIS).

51 (68,9%) of the CT group completely healed (cessation of discharge and blood spotting) versus 60 (88,2%) of the LIS group. The continence score was 0 for both groups but two patients developed a slight flatus incontinence after LIS. 48 patients need at least two oral analgesics daily up to fourth day in medical group, 20 in the surgical one. 43 patients described as painless the first evacuation after LIS, whereas pain was still present after ten days in 35 pts in CT group.

Conclusion: LIS is an effective, less painful, fast recovery treatment for chronic anal fissure. Medical treatment should be reserved in our opinion to patients refusing surgical treatment.

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A Good Start: One-Year Effects with Endolog System for Moderate to Severe Hallux Valgus Deformity

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Objective: The purpose of this study is to describe the mid-term outcomes of a new surgical technique by Endolog system for the correction of moderate and severe hallux valgus deformities.

Methods: The study involved 32 feet of 24 patients who were treated with an endomedullary nail-plate which was inserted after a distal osteotomy of the first metatarsal. In some cases an Akin osteotomy performed to complement the metatarsal correction.

Results: The results were evaluated using the forefoot score of the American Orthopaedic Foot and Ankle Society (AOFAS). Radiographic measurements included the hallux valgus angle (HVA), first/second intermetatarsal angle (IMA) and distal metatarsal articular angle (DMAA), before surgery and one year after it. An optimum clinical result was achieved with an average AOFA score of 93. Hallux valgus angle improved from 37 degrees preoperatively to 18 degrees postoperatively, the intermetatarsal angle from 15 degrees to 8 degrees and the DMAA from 15 degrees to 6 degrees.

Conclusions: Even if satisfying clinical e radiographic results are reported, long-term effects of this surgical method should be further investigated.

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Outcome of Intralesional Curettage with Adjuvants for Low-Grade Intramedullary Chondrosarcoma of the Bone

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Objective: We describe our retrospective clinical study, performed on 23 patients (11 males and 12 females) who were affected by low-grade intramedullary chondrosarcoma of long bones.

Methods: Our protocol consisted of the following treatment details: intralesional curettage, phenolization and cementation of their lesion.

Results: The patients' average age was 44,5 (29 to 71 years old). The mean overall follow-up was 6.1 years (range 2 e 11). The average Musculoskeletal Tumour Society score (MSTS) six months after surgery was 76,8% (between 61% and 87%). Another evalutation has been carried out twelve months after surgery in all 22 patients showing an average score of 89,8% (between 63% and 100%).

Conclusions: We support intralesional curettage with phenol and bone cement as an effective treatment strategy for low grade intracompartimental chondrosarcoma of long bones. Strict follow up in multidisciplinary team is determinant in order to treat local recurrences and metastasis.

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Mastectomy in Female-to-Male Sex Reassignement an Algorithmic Approach

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Objective: Subcutaneous mastectomy is the first operative procedure in sex reassignment in female to male transsexuals. Several techniques are described in the literature borrowed from the treatment of gynecomastia. We propose a treatment algorithm for choosing the appropriate subcutaneous mastectomy technique according to patient's breast volume and the degree of ptosis.

Methods: The proposed techniques include semicircular, trans-areolar, concentric circular, free nipple areolar graft and inferior dermal pedicle. The objectives of this surgical procedures are removal of breast tissue and skin redundancy, repositioning of the nipple areola complex and minimization of the scars. A careful analysis of the morphological features of the patient breast allow to choose the most appropriate procedure.

Results: In patients with moderate breast volume and mild ptosis we suggest the inferior semicircular areolar approach. The concentric circular technique can be used for small breast with moderate skin excess. In cases of severe ptosis we propose to preserve the nipple areolar complex and to move it in the proper position with a dermal flap based on the inferior pedicle.

Conclusions: The main indicators for the choice of the mastectomy technique in female-to-male transsexuals are breast volume and ptosis degree. Particularly in cases with mild to severe ptosis, the proposed inferior dermal pedicle technique seems safer than the free nipple-areola complex graft, minimizes the number of chest wall scars and avoids irregular profile of the inferior breast pole.

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Unusual Presentation of Gastric Band Erosion

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Objective: Case report of asymptomatic banding erosion.

Methods: A 33-year old man came to our institution because of recurrent hypoglycemic crises after meal with blood glucose less of 40 mg/dL. In 2006 he underwent gastric banding in another hospital without a follow-up after banding placement. At presentation patient had lost 84 Kg with a BMI of 30,8. Symptoms or signs related to banding were absent. We prescribed with success a six meals a day diet to avoid hypoglycemic crises. Finally an imaging study was conducted. The gastrografin study was negative for leak. Endoscopy revealed an oesophagitis grade A (Los Angeles classification) and a stomach wall erosion with the gastric band partially migrated into the gastric lumen. A successive gastrografin study with band deflated and abdominal CT scan were negative for leak. There was no evidence of collections or esophageal dilatation. The phi-angle was normal.

Results: Banding was laparoscopically removed.

Conclusion: Erosion usually presents as a late complication with an incidence of 1% to 5%. Different etiologic hypotheses were suggested as abnormal reaction of the periprosthesic tissue, infection of the band site, excessive inflation of the band, damage of the gastric wall during band implantation and band slippage. Clinical presentations range from asymptomatic presentation with an incidental diagnosis to life threatening sepsis and multiorgan failure. According to us the band erosion does not explain the hypoglycemic crises of patient. They should be especially related to an increased intake of sweets in the last year and an early diabetes. There are multiple options for band removal, but the most common method is laparoscopically.

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Surgical Management of Dominant Thyroid Nodule: Lobectomy or Total Thyroidectomy? A Critical Review

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Objective: The review evaluates lobectomy vs total thyroidectomy in surgical treatment of toxic adenoma.

Methods: We used the PubMed and Ovid EMBASE database to search with the terms dominant thyroid nodule, autonomously functioning thyroid nodule, toxic adenoma, Plummer adenoma together with thyroid lobectomy and isthmectomy. Inclusion criteria were publication date between January 1, 1995 and February 28, 2011, English and Italian language. All selected manuscripts were independently reviewed from three authors according to three points: recurrence of hyperthyroidism, iatrogenic hypothyroidism and other postsurgical complications. Finally data selected by each author were compared and used to elaborate the report.

Results: In the three main studies postoperative thyroid hormone replacement was respectively required in 48,8%, 8÷27,4% and 16% after lobectomy and a recurrence of disease was respectively 1,5%, 0,3% and not reported. A prospective study reports a recurrence after lobectomy of 21%. On regard to injury of the laryngeal nerves and hypoparathyroidism there is no significant difference between a primary total thyroidectomy and lobectomy, except a higher rate of temporary hypothyroidism in the first one. Rates of complications in total thyroidectomy after lobectomy are significantly higher in comparison with the primary total thyroidectomy.

Conclusion: The total thyroidectomy should be considered the best surgical option in the surgical management of toxic adenoma in regard to the immediate and definitive therapy and the rapid attainment of euthyroidism with thyroid ormone replacement.

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Short and Long-term Results of Air-Filled Intragastric Balloon in Obese Patients

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Introduction: The aim of this study was to analyze the effect of the Heliosphere® BAG in terms of early weight reduction and trend of weight at a distance of 18 months after removal.

Methods: Between November 2006 and November 2010, 45 patients underwent the placement of endoscopic intragastric air-filled balloon. All patients were selected by a multidisciplinary team according to international guidelines. At 18 months after removal, weight control was performed by telephone questionnaire.

Results: 32 patients completed the 6-month stay of the balloon and showed a mean weight reduction of 12 Kg with a reduction in BMI of about 5 points. 15 were contacted by telephone 18 months after device removal: the mean basal BMI was 40.62 kg/m² and mean weight was 113.37 Kg. The mean BMI at the end of 6 months was 35.75 kg/m² and the mean weight was 99.75 kg; the BMI at 18 months after removal was 37.28 kg/m² and the mean weight was 103.56 kg. No technical problems were recorded at balloon insertion and removal.

Conclusion: Heliosphere® BAG showed good weight loss in the short term. In patients with 18 months follow-up, we observed a minimal weight increase (a mean of 4 kg). This device, within a few months after removal, may reduce surgical and anesthesiological risks for bariatric or other elective surgery. Moreover Heliosphere® BAG with dietary support can offer a potential benefit in the long-term treatment of obesity.

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Long Waiting Lists and Avoidable Complications: The Example of Cholecystectomy

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Background: Cholecystectomy is between the surgical procedures with a longer waiting list and a significative proportion of patients waiting surgery suffer from symptoms related to complications of cholelithiasis. The aim of this study is to evaluate the mean waiting time for elective cholecystectomy and the economic impact that the waiting list creates.

Material and Methods: A retrospective and comparative study for patients undergoing intervention of cholecystectomy in a period between April 2007 and April 2010 was performed. Patients who had a pre-operative period without complications (group A) and patients who required unplanned admissions, additional diagnostic tests (group B), and operations in emergency (group C) were analyzed. Regional tariff of outpatient specialist care and hospital care was used.

Results: 86 patients were included in the study: 67 (78%) in the group A, 7 (8.1%) in the group C and 12 (13.9%) in the group B. The mean waiting time before surgery was: 192 days for group A, 134 days for group B and 44 days for group C. Overall cost of health care expenditure for each patients was: 3857,44 € for group A, 7041,98 € for group B and 4062,65 € for group C. Patients in group B had a statistically significant longer hospital stay compared to patients in group A and C.

Conclusion: Early laparoscopic cholecystectomy for complicated cholelithiasis is the cheaper treatment considering the health care costs and reduced the social costs related to the absence from work and the deterioration in the perception of quality of life.

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Long-Term Outcome of Conversion in Laparoscopic Colorectal Surgery

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Objective: Conversion rates in colorectal laparoscopic surgery vary from 8 to 29% in the Literature. An increased postoperative morbidity and prolonged hospital stay have been described as the main adverse outcomes in converted patients.

Some studies suggest a negative influence of conversion on the oncologic outcome, but consistent data are still lacking. This study evaluates the impact of conversion and analyze the differences in the oncologic outcome of patients who underwent laparoscopic resection for colorectal cancer.

Methods: A monocentric retrospective study on 247 patients operated for colorectal cancer between 2004 and 2007 was performed. The operative results and long-term outcomes of 44 patients with conversion (22%) were compared both with 200 cases of successful laparoscopic and 103 open operations. We considered as conversion a widening or an anticipation of a Pfannenstiel incision, an upfront midline or transverse laparotomy.

Results: Median follow up was 56 months. Our results show that the disease-free survival and local recurrence (6.81% in the converted group) were not significantly worse by the presence of conversion in laparoscopic cancer resections.

Conclusions: Conversion should not be viewed as a complication but as a solution to overcome the limitations of laparoscopic surgery. The adoption of a standardized operative strategy from an experienced team, together with an early and prompt decision for conversion and careful patients selection may improve the outcome of converted patients.

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Current Indications for Laparostomy

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Background: Laparostomy is a surgical technique used in urgent or emergent settings as last option for life – threateting conditions as intra-abdominal infections, severe acute pancreatitis, major abdominal trauma and compartment syndrome.

The decision to leave the abdomen open is based on the development of intra-abdominal hypertension (IAH), the degree of contamination, visceral or retroperitoneal swelling, adherence between bowel and abdominal wall or fixity of the intestinal loops. This technique allows collections drainage with septic focus elimination, relief of intra-abdominal pressure, direct visualization of the abdominal content and easiness of re-exploration. Towel clip closure, Bogata bag, mesh, zipper and VAC systems are available options for the temporary closure of the abdomen.

Methods: This study reports clinical characteristics of patients undergoing laparostomy, treatment choices, short and long term outcome.

We considered this technique in selected cases of very critical general conditions and extremely difficult local control of the infective source: 4 patients had post-operative intra-abdominal sepsis, 2 severe infected necrotic pancreatitis and 1 bowel infarction. BB was used in our cases.

Results: All cases required a long ICU period, needed a median of 4.4 re-interventions and had a prolonged hospital stay (median 45.7 days). Two patients died of septic complications (MOF) during the hospital stay, while 5 survived.

Conclusions: Laparostomy can represent the best damage limitation surgery in patients with dramatic general and local conditions, when a resolutive one-step procedure cannot be performed.

Despite the high rates of morbidity and mortality it should be considered as a life-saving procedure for selected patients.

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Arcuate Ligament Syndrome and Aneurysm of the Inferior Duodeno-Pancreatic Trunk: Multidisciplinary Treatment Strategy

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Background: The median arcuate ligament syndrome is a rare vascular pathology caused by compression of the celiac axis from the medial arcuate ligament of diaphragm. Abdominal pain, weight loss and sistolic epigastric bruit are typical symptoms, sometimes associated with nausea, vomiting, diarrhea and symptoms of chronic visceral ischemia; rarely it could be asymptomatic.

Case Report: A 58 year old woman with history of 1 year vague abdominal cramps, not associated with meals, or other signs or symptoms. Abdominal ultrasonography showed a visceral aneurysm, the CT confirmed its origin from the inferior duodeno-pancreatic trunk. The Angiography performed to embolize the aneurysm, also revealed a sub-occlusive stenosis of the celiac trunk. The stenosis was compensated by hypertrophic visceral branch from where the aneurysm arises. Endovascular treatment was postponed until after celiac trunk revascularization (to reduce the risk of splanchnic ischemia). After arcuate ligament laparoscopic complete dissection, CT showed celiac trunk's partial recanalization (40%). Lumen caliber optimization is necessary before any aneurysm's correction.

Conclusions: We describe a case of an inferior duodeno-pancreatic branch aneurysm compensating an asymptomatic ab-extrinsic compression of the celiac trunk. The surgical management was planned in 2 steps: laparoscopic release of the ligament and exclusion of the aneurysm.

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The Creation of Pneumoperitoneum in Obese Patients

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Objective: The creation of the pneumoperitoneum is the first surgical procedure in laparoscopic abdominal surgery. Morbid obesity is a risk factor for iatrogenic injuries due to the considerable thickness of the abdominal wall. The aim of this study was to assess the feasibility and the incidence of complications of the use of Veress needle (VN) in obese patients undergoing bariatric surgery.

Methods: Between March 2004 and December 2010 a non-randomized retrospective study was performed on 139 obese patients (mean BMI = 45,94 kg/m^2). Blind VN insertion and insufflation followed by optical trocar insertion was the most widely used technique.

Results: Of 139 patients, VN was successful used in 138 cases (99,28%), in one patient the procedure failed and an open laparoscopy was performed (0.72%). During the study period, there were 63 gastric bypass, 18 sleeve gastrectomy, 52 gastric banding and 8 reoperations. The VN was inserted at left upper quadrant in 46 cases and the midline above the umbilicus in 92 cases. A colonic perforation after VN insertion at the left upper quadrant occurred.

The overall rate of complications was 0,72% (1/138). There were no access related complications when VN was inserted above the umbilicus; complications rate was 2.17% (1/46) at upper left

quadrant VN placement. No cases of subcutaneous emphysema or extraperitoneal insufflation were observed.

Conclusions: In our experience, the success rate was 98.28% and the overall rate of complications was 0.72%. The Veress needle technique can be considered feasible and safe even when used in obese population.

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The Role of Total Thyroidectomy for the Treatment of Hurthle Cell Adenomas of the Thyroid

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Objective: Hurthle cell adenomas of the thyroid are rare neoplasms with a controversial biologic behaviour. Some authors believe that are to be considered malignant lesions with a lower progress capacity in comparison with carcinomas, proposing an aggressive surgical approach. Others sustain that they have no malignant potential and prefer lesser resections advocating lower complication rates. The aim of this article is to evaluate the role of total thyroidectomy in the treatment of such neoplasms.

Methods: We retrospectively review clinical records of 10 patients with Hurthle cell adenoma treated in our institution in the last 10 years. The female to male ratio was 9:1 and the mean age 50.6 years. All patients underwent open total thyroidectomy and no adjuvant treatments were employed. All patients were interviewed by telephone with a mean follow up time of 50.8 months.

Results: There was one case of permanent hypoparathyroidism while no cases of recurrent laryngeal nerve damage or other complications were registered. All patients were alive at the time of follow up and no cases of recurrence or disease progression were registered.

Conclusions: Total thyroidectomy represents the best treatment for Hurthle cell adenomas as it permits to confirm diagnosis excluding capsular or vascular invasion, to detect synchronous unidentified lesions and to avoid progression of disease or recurrences. Complications of such surgical approach are extremely low in experienced hands and reintervention is avoided, while post-surgical substitutive treatment is better assessed in the absence of residual thyroid tissue as in lesser resections.

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Laparoscopic Surgery Study of Complications Due to Pneumoperitoneum Exploratory Trial

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Introduction: In this survey, we have checked the complications, in laparoscopic surgery, related to the induction of the pneumoperitoneum.

Materials and Methods: This study is carried out from July 2008 to May 2010. Inclusion's standards: operation performed in VLscopy; BMI not more of 27; operations in election of emergency way; ASA I–II–III. Recruitment made in according to randomized tabulated. All patients submitted to chest Rx after 48h from the operation. Post-operative early mobilization of the patients. Checked 64 patients: 43 men and 21 women with 55 years old median age (range 18 – 88); BMI with median of 26 (range 25 – 26.8); ASA I: 12 patients; ASA II: 32 patients; ASA III: 14 patients.

Results: About laparoscopic technique (open laparoscopy), haven't been shown big vessels or abdominal organs lesion. No case of anaesthesiological, nephrological and cardiological complications. About pneumological complications, we have observed 2 cases of bilateral basal and 3 cases of right basal pleurical effusion. Patients with bilateral pleurical effusion showed post-operative albumin less then 1,9 mg/dl, while the other 3 cases were classificated as ASA II, without comorbility, and were in the fifth decade of life. In the first 2 cases, the pleurical effusion is been solved with medical therapy, while, in the other 3 patients is been solved spontaneously after 48h from the diagnosis.

Conclusions: Our survey has shown that pneumoperitoneum can cause right basal pleurical effusion in no complicated patients and the determining cause could be related diaphragm congenital malformations, like fascicules muscle agenesia, with or without serous cavity anomalies that can create communications between pleura and peritoneal cavity. Furthermore pneumoperitoneum, in these patients, can increase discontinuity's caliber and can create a passage for CO_2 from the peritoneal cavity and pleurical cable. For this reason, the parietal pleurical package can be compressed, then inside the pleurical capillaries the hydrostatic pressure, in according to the Starling's rule, can increase on the venous side too, with the production of pleurical effusion. Everything can resolve in 72h from the operation for absorption of the CO_2 by pleurical capillaries.

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Alveolar Process Reconstruction by Means of Titanium Mesh

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The successful use and positive long-term outcome of osseointegrated implants in the treatment of completely or partially edentulous patients require an adequate quantity and quality of alveolar bone prior to implant placement. When the presurgical evaluation reveals insufficient bone volume at the desired implant sites, alveolar ridge augmentation is required if endosseous implants are to be placed in the planned prosthetic positions. Titanium mesh with autogenous bone alone or mixed with anorganic bovine bone has been used successfully in reconstructive implant surgery in various case reports and case series. Although the use of autogenous bone beneath the titanium meshes is advised because of its intrinsic osteogenetic properties and a more rapid course of bone regeneration, situations exist in which autogenous bone grafts are not feasible, or patients refuse to have bone harvested from extraoral sources. In recent years, the use of titanium mesh in combination with bone substitutes has been proposed and tested for the partial and full augmentation of the alveolar process in implant surgery. Among the available bone substitutes, an organic bovine bone mineral has been successfully used to correct bone defects adjacent to implants as well as in sinus lift and alveolar ridge–augmentation procedures. Among determining success factors can be highlighted a careful soft tissue managements, a proper preparation of recipient site, a complete stabilization of the mesh, an adequate filling with graft. If any of these is not complyed with failure can occur. Most failure will reeal with mesh exposure. Mesh exposure are claimed not to be relate with augmentation failure. Evidences show that it is strictly depending from the their wideness ad precocity.

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Esophageal Perforation: Our Experience

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Objectives: The esophageal perforations aren't frequent pathologies and they are traditionally associated to a high rate of morbidity and mortality (15%–50%). They represent a true surgical emergencies. They need a diagnosis and a speedy treatment. The majority part of these cases are iatrogenic (endoscope maneuvrers and periesophageal surgery) and spontaneous (Boerhaave syndrome). In other cases they are subordinated to injury, ingestion of caustic and foreign bodies. The choice of the treatment depends over all from the cause, the perforation location and the time interval between the injury and the beginning of the symptoms.

Materials and Methods: From 2007 to 2011, 6 patients have been diagnosed and treated in our U.O. with an esophageal perforation.

Results: All the patients were males, an average age of 48 years old. The perforation reasons were spontaneous for 2 cases (Boerhaave syndrome), foreign bodies for 3 cases and iatrogenic for 1 case. 4 patients have had a surgical treatement and 2 patients in a keeping way. The mortality peri-operating was of the 0% with hospital bed of 11 days; in one case there was an hematemesis with a delay of 30 days from erosion esophagitis.

Conclusions: The diagnosis of esophageal perforation requires a high clinical suspect and an early radiological assessment. Till today the treatment of this pathology is controversial, even if different evidences in the literature suggest an early and aggressive surgical approach.

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Hearing Preservation in Cochlear Implant: Our Experience

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We present results of a retrospective study investigating the preservation of residual hearing after implantation with a contour advance perimodiolar electrode array. We have also analyzed, the data obtained with the use of two different surgical approaches: array insertion through the round window (RW) versus standard cochleostomy (SC).

Objectives: The aim of this study is to evaluate the success of the 'soft surgery' in preserving residual hearing.

Material and Methods: A 'soft surgery' protocol was defined as follows: short retro-auricolar incision, regular posterior tympanotomy, minimal aspiration of the perilymphatic fluid, 1–1.2mm cochleostomy hole anterior-inferior to the round window or pure round window, fast closure of the endostioum to avoid the blood contamination into the cochlea.

From January 2009 to September 2011, candidates for this study were selected according to the AOOI guide lines and to the following criteria: cooperative patients with measurable preoperative auditory thresholds and without contraindication to full insertion, without additional handicaps. All the candidates were tested pre-operatively, and every 6 months post-operatively. We evaluated the pure tone average. Postoperatively, the patients are going to be divided in two sub-groups: SC and RW.

Results: Hearing threshold level data were available for 19 patients of the cochleostomy group and 4 of the round window group. 69% of subjects demonstrated preservation of thresholds to within 10 db of preoperative thresholds PTA, in particular 75% in RW group and 68% in SC group. We have found a difference in hearing preservation in the two surgical groups; but is not also statistic significant because the sample size in not enough. We are still collecting data from older and new patients to improve the

statistics. Our study results confirm that it is possible to preserve preoperative hearing levels in the majority of patients with the adherence to the major principles of 'soft surgery'.

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From the Radial Forearm Flap to the ALT: Our Reconstructive Evolution of Oropharyngeal Region

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Objective: The free flaps are the gold standard in reconstruction of oropharyngeal region. If at first the radial forearm fasciocutaneous flap (RFFF) and Fibula free flap were often the first choice, now the ALT free flap achieves popularity for this kind of reconstructions. We report our experience in the microsurgical reconstruction of the oropharyngeal region comparing the use of RFFF with ALT.

Methods: From 2003 to 2010 were treated 48 pz affected by squamous cell carcinoma of the oral cavity. 26 pz were treated with RFFF and 22 pz with ALT. In all cases the microsurgical flap dissection was performed simultaneously with the demolition phase; the recipient sites were the tongue, the mouth floor, the pharynx, the palate. In the RFFF set up was always performed skeletonization of the cephalic vein. The RFFF was used to reconstruction the soft tissue defects ≤ 5 cm, while the ALT to reconstruction the defects ≥ 6.8 cm.

Results: Flap success was 97% in the ALT and 92% for RFFF. The average RFFF size was 5x8 cm, while the ALT was 7x12cm. Operative time was significantly shorter in RFFF reconstructions. In ALT cases the donor site was closed directly and in RFFF donor site closure was carried out with skin grafts. No major complications were seen.

Conclusions: The results obtained with the ALT are comparable to RFFF. Thanks to the minimum donor site morbidity, the long pedicle and the ALT softness, we consider the ALT as ideal choice for reconstruction of oral cavity.

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Surgical Management of Spigelian Hernia: A Clinical Case and Review of Literature

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Background: The diagnosis of Spigelian hernia is often difficult, due to symptoms that are not specific, anatomic conditions (usually is occulted in the abdominal wall), diffiCluty to detect during regular radiographs. Frequently, it starts with complications: occlusive (23%) subocclusive syndrome (8%); for this reason a rapid a sure diagnosis is really important. Treatment of spigelian hernia is surgery.

Case Report: We report a case of a little 'Ventral Lateral Hernia'(about 1 cm), not palpable preoperatively, in a 50 year-old female. The defect was repaired by 1 propylene interrupted sutures placed in between the fused aponeurosis of the transversus abdominis and internal oblique muscle. The external oblique aponeurosis was closed with continuous Vicryl sutures. The patient was discharged on the second postoperative day. There has been no report of recurrence on follow-up.

Discussion: Spigelian Hernia (SH), or Ventro-Lateral hernia, is a rare clinical condition, it represents about 1–2,4 % of hernial formation cases of the abdominal wall. It is localised laterally to the rectus muscle and emerges from the semilunar arch. This area is characterized by a specific anatomic arrangement of sheaths of abdominal large muscle, resulting in a relative tenderness of the wall.

Surgical Technique for Spigelian hernia repair include primary open repair using non resorbable sutures, placement of mesh/mesh plugs and laparoscopy.

Due to the raryity of this kind of hernia there isn't actually a gold standard for the surgical technique.

Conclusion: Primary open repair using non resorbable suture without mesh is a good method for small Spigelian Hernia not preoperative recognized

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An Atypical Dermatitis Site: Particular Presentation of Inflammatory Bowel Disease

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Introduction: Inflammatory bowel desease (IBD) extra-intestinal onset includes dermatosis. They occur in the 19% of ulcerative colitis (UC) and in the 14% of Crohn's disease (CD). Pyodermagangrenosum and erythema nodosumrapresents the most common mucus- skin appearances.

Clinical Case: A woman of 64 years old, ex-smoker, obese person, with medical history of hypertension, venous deficiency of legs, subjected to surgery childbirth came to our observation She refears an history of bowel diarrhea by some years. The clinical examination picks out in the hypogastric region presence of necrotic big ulcer where is seating voluminous hernia. Skin ulcer to the instep. The laboratory examinations pick out iron deficiency anemia, hypoalbuminemia, suspect monoclonal gammopathy. Multiple enterocutaneusfistula is diagnosed with incarcerated hernia, gangrene and necrotizing panniculitis. Surgical approach

consisted in a large recent abdominal tissue, right emicolectomy, tummy tuck. Histological examination was positive for Crohn's disease and pyodermagangrenosum for necrotic ulcer site.

Discussion: In the MC the incidence of mucus-skin events changes with the location of the desease. Colon localization is associated in 23% of cases to dermatosis. Sometimes these lesions may precede the onset of IBD or be secondary to malabsorption and drug treatment with corticosteroids. The skin mucus events closely associated with IBD are erythema nodosum and pyodermagangrenosum. The pyodermagangrenosum is a neutrophilic-dermatosis without infection, it's comes out with a nodule, more frequently in anteriortibial region, which increseases and ulcerates.

Conclusion: A dermatitis in atypical site associated to gastrointestinal sympthoms has to be carefully evaluated as a possible manifestation of IPB disease.

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Carcinoid Tumors of the Appendix: A Case Report and Review of Literature

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Background: Appendiceal carcinoid tumours are found in 0.3–0.9 per cent of patients undergoing appendicectomy. Diagnosis is rarely suspected before histological examination In most cases, they are found incidentally during appendectomies that represents also the choose surgical treatment.

Clinical Cases: A man 50 years old, with general abdominal pain, fever and voimiting came to our observation. Any anomalies were founded in laboratory pattern. Ultrasound assessed hyperemia, thickening, ipomobility of the last part of the ileum with a small spilling and hypoechogenicity of mesentery CT showed enlarged lymph nodes spread. A laparoscopy was performed that was fastly converted in open approach.

Surgery consisted of appendicectomy and omental resection. Definitive histology was positive for carcinoid tumor.

Discussion: Carcinoid tumor of the appendix are not common. There are few descripiton in literature. But it seems clear that appendix tumori is not aggressive and metastatic spread is unusual for dimension smaller than 2 cm. For this reason an early diagnose is fundamental. Symptoms are indistinguishable from acute appendicitis

Controversy exists over the management following appendicectomy. Appendiceal carcinoid tumor can be managed by simple appendectomy and resection of the mesoappendix, if its size is ≤1 cm.

The indications for re-intervention represented by all lesions larger than 2 cm in diameter, histological evidence of mesoappendiceal extension, tumours at the base of the appendix with positive margins or involvement of the cecum, high-grade malignant carcinoids and gobletcell adenocarcinoids. The recommended resection is represented by right hemicolectomy.

Conclusion: The symtoms of appendix carcinoid are the same of the appendicitis. Appendiceal carcinoid tumor can be managed by simple appendectomy and resection of the mesoappendix, if its size is ≤1 cm, and the long-term prognosis of incidentally found carcinoids of the appendix is good. For these reasons we believe that the appendicectomy is the gold standar for the symptomatic acute appendicitis than the ' wait and see'.

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Impact of Resections Margins on PENILE Squamous Cell Carcinoma: A Case Report and Review of Literature

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Background: PENILE squamous cell carcinoma is a relatively rare disease in the Western world. Surgery is considered the cor- nerstone of locoregional treatment, with 80% cure in patients with 1 or 2 involved inguinal nodes without ENE.

Surgery is gold standard, partial resection or amputaction rapresents the gold standard supported from radiotherapy in ordert to control inguinal limphatic spread.

For partial resections resections margins (2 cm) are important in ordert to avoid local recurrences that results in worst patient's quality of life.

Clinical Case: On February 2011 a 56 patient with an history of previous surgery of partial penile amputation in another hospital in 1996 for penile tumor that results at histological exam in 'Squamous epithelioma medium degree of differentiation, ulcerated, infiltrating the subcutaneous tissue and vascular structures (T2) with conspicuous peritumoral lymphocytic infiltration and presence of genital warts and lichen lesions scleroatrofico the edge.' From 2010 the patient refears around erythematous lesion on the residual part of glans that in the following months showed dimensions increase. Ct exam showed any distance metastatic involvment. For this reason a total amputation and inguinal limphoadenectomy until femoral vessels. Post-operative was regular.

Discussion: It is showed that in penile cancer resections margin (more than 2 cm) are important in order to prevent local recurrence (95% with positive margins), but, also inguinal lymphonodal involvment that can result in distant recurrence that is regarded as decisive for survival.

For this reasons limphoadenectomy is often performed even if can result in inguinal relapses, difficult to manage and cause a lot of suffering because of pain, fetor and lymphedema, often leaving the patient bedridden and debilitated. Standard approach for penile cancer is resection with clear martgins for small tumor, partial or total amputation for larger ones and lymphoadenectomy in doubt of involvement followed to adyiuvant radiotherapy.

Conclusion: In case of positive margins local recurrence is frequent for penile carcinoma. In these cases total amputation rapresents in many cases the surgycal treatment with limphoadenectomy until femoral vessels.

This results in worst impact on patient's quality life and survival decrease.

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Tumor Size and Fuhrman Grade: Prognostic Evaluation of Renal Cell Carcinoma

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Background: Renal cell carcinoma is the most frequent histological type among malignant renal disease affecting mainly the fifth to seventh decade of lifePrognostic factors in Renal Cell Carcinoma include anatomical (TNM classification, tumor size), histological (Fuhrman grade, histologic subtype), clinical (symptoms and performance status), and molecular features. The Fuhrman grading system is the second most widely used classification of renal cell carcinoma based on cytological features of differentiation of tumor cells.

Clinical Case: A woman 82 years, with weight loss and persistent abdominal pain for about 18 months, underwent to abdominal ultrasound scan that identify a retroperitoneal mass of about 16 cm in diameter. At first step she refused surgery. TC TB showed the formation of 18x15 cm in diameter with necrotic colliquative areas, kidney stones and lower caval syndrome from extrinsic compression. Due to the persistence of septic symptoms a complete remove retroperitoneal mass 25x20 cm in diameter, encompassing the right kidney was performed. The final histologic exam showed arenal cell carcinoma (weight 3,5 kg) Fuhrman grade 3 conventional type with large areas of necrosis and abscess foci (Vimentin positivity to CD10, panCK/CK8, EMA and negative for synaptophysin, Melan A and inhibin). Due to the neoplastic dissemination, above all bone metastases patient died at 7 months follow up.

Discussion: T, Tumor's size in centimeters and Furhman scale's degree represent the most important prognostic factors for the evaluation of overall survival and disease-free survival in patients undergoing nephrectomy forrenal cell carcinoma are represented by Tumor necrosis, microvascular invasion and the interest of the perirenal fat are negative prognostic factors for overall survival.

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Multivisceral Resections for Colorectal Cancer: Is Occlusive Presentation an Independent Prognostic Factor?

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Background: Practise guidelines recommended en bloc multivisceral resection (MRV) for all involved organs in patients with locally advanced adherent colorectal cancer (LAACRC) to reduce local recurrence and improved survival. Any clear management is indicated for LAARC in occlusive syndromeat first presentation. Aim of this study was the impact of occlusive syndrome in LAACRC in terms of survival and the eventual role like a prognostic factor.

Material and Methods: 43 patients underwent abdominal RMV for cancer with curative purpose; about these 22 for LAACRC. Among these A group of 6 patients with occlusive was compared with a second one of 16 patients with uncomplicated presentation. I. For every patient tumor, clinical characteristics, surgical technique, hospitalization's time, hystologic exams were analized.

Three years was the follow-up with check every 6 months. P Statistical analysis was performed with a commerciable available software package (SPSS for windows)

Continuous and discrete variables were assessed with one way analysis of variance and Test T student. $P < .05$ was considered statistically significant.

Results: Decrease of survival in patients under went surger for LAARC ($p = 0,033$) was observed, postoperative complications rate was higher for patients with uncomplicated presentation. ($p = 0,004$) Higher CA19.9 values were associate to RMV with complicated presentation ($p = 0,004$) and connected with law survival ($p = 0,024$).

Conclusions: Occlusive presentation is a negative prognostic factor for the execution of RMV for LAARC, Higher level of CA 19.9 are connected with survival decrease at 3 years followup. Further research and randomized trials are requeared to validate these findings.

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Outcome of Surgical Management of Locally Advanced Colorectal Cancer

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Background: Surgical management of colorectal cancer is fuction of two indipendent factors: loco regional extention and-lympho – nodes status.

Whyle for T3 the oncologycal out come in function of lymphonode's status is assessed, there is no evidence in literature of correlation for T4 (locally advanced cancer).

Lymphonode's involvement plays a central role in colorectal surgery and above all in the treatment of T4. If Standard Resection are performed for T4a (without invasion visceral peritoneum), Multivisceral resection are recommended for T4b (locoregional extention into the adjacent organs and structures) without any clear evidence. Aim of this study is to assess the impact on survive in function of lymphonode's status and local invasion.

Material and Methods: From 1 January 1998–31 December 2009, 122 patients under went colorectal surgery with curative purpose. Among these respectively 69 with T3 and 19 with T4 (T4a:8, T4b 11) Lymphonode's involvment was retrospectively evaluated in combination to loco-regional in vasions in order to evaluate the outcome of surgycal management of locally advanced colorectal cancer. Patient with imaging evidence of T3-T4a underwent standard resection while for T4b were performed en-bloc resection. Statistical Analysis was performed with Spss software.

Results: Any statistical evidence was found between locoregional invasion and number positive lymphonode's at definitive hystologicalexam (T3-T4;T3-T4a;T3-T4b;T4a-T4b).

Male was found like independent negative prognostic factor in terms of morbidity and local recidive. Any difference in terms of survival was observed between T3-T4;T4a–T4b at three years follow-up.

Conclusion: Our results show that surgycal treatment of T4 colorectal cancer is function of loco-regional invasion. For T4a standard resection represent gold standards, while for T4 b multivisceral resection are necessary to improve survival.

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Dioxin Exposure and Incidental Thyroid Double Microcarcinoma: A Clinical Case

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Background: Total thyroidectomy represents the gold standard for thyroid's disease for the high incidence of incidental carcinoma and microcarcinoma demonstrated by histology.

Thyroid follicular lesions and malignangy are induced by dioxin and dioxin-like compounds exposure but there is no clear evidence about the effects of dioxin exposure on the thyroid cells.

Clinical Case: A man 44 years old with family's history positive for cancer, referred the presence of neck-phlegmon after a insect bite random on workplace, a company for disposal of waste.

After antibiotics therapy the patient underwent ultrasonographyc and scintigraphyc exams that showed the precence of multinodulargoiter. FNAb suggested anomalies in cells structures (tir 3).

In consideration of patient's history and toxic exposure a total thyroidectomy was performed.

The response of definitive histologyc exam showed the presence of two incidental bilateral microcarcinomas. The patient is in radiometabolic treatment.

Discussion: Factors such as dioxin, furans and dioxin-like compounds, entering the body and because of chronically lipophilicityremains in adipose tissue: exposure to polychlorinated biphenyls (products that are developed by the combustion of waste) causes a dose-dependent decrease in the levels circulating T4 and is associated with the development of cholangiocarcinoma, hepatocellular carcinoma, keratinized cystic epithelioma of the lung.

It is reported in the literature high association of exposure to dioxin and furans and carcinogenesis invitro and invivo, because of an hyperactivation of cytochrome P450. Further studies are still needed to clarify the relationship between the effect of dose accumulation and development of cancer.

Conclusion: The impact of random dioxin exposure on thyroid gland is uncertain and randomized studies are still necessary for the cancer's uptake but is an important element in the planning of surgycal approach. In suspect of malignancy total Thyroidectomy represents the gold standard

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Robot-Aided Thoracoscopic Thymectomy for Early Stage Thymoma

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Background: Minimally invasive thymectomy for stage I–II thymoma has been suggested in the last years and considered technically sound; however due to lack of data on long term results, controversies still exist on surgical access indication. We sought to evaluate the short and long term results after robot-assisted thoracoscopic thymectomy in early stage thymoma.

Methods: Data were prospectively collected from between 2002 and march 2011, 14 patients (4 males and 10 females, median age 53 years) with Masaoka stage I (n = 5, 35, 7%), II (n = 9, 64, 3%) were operated on by left-sided robotic thoracoscopic approach. 5 (35, 7%) patients had myasthenia gravis associated.

Results: All resections were R0. Median operative time was 139 minutes (range 70–185). One patient needed cervicotomy to complete thymectomy. No intraoperative or postoperative vascular and nervous injuries were recorded, no preoperative mortality occurred. 2 (0,14%) patients had postoperative complications (one atrial fibrillation and a case of haemothorax treated with chest drain). Median hospital stay was 3 days (2–9). WHO histology was 2 A, 4 AB, 3 B1, 3 B2 and 2 B3. Postoperative radiation therapy was administered in 6 cases. At a median follow up of 26 months 13 patients are alive and 1 died for leukemia. All patients with myasthenia gravis improved after surgery.

Conclusions: Our data indicates that robot-enhanced thoracoscopic thymectomy for early stage thymoma is a technically safe and sound procedure with low complication rate and short hospital stay. Oncological outcome seems good, but prospective randomized trials are needed for comparison with transternal approach.

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Single Incision Cholecystectomy: More Than Cosmesis

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Background: Currently, laparoscopy cholecystectomy is indisputable regarded as the gold standard for the treatment of symptomatic gallbladder stone disease, even in the case of acute cholecystitis. Recent studies have showed Single Incision laparoscopic surgery (SILS) like an alternative technique with regard to reducing post-operative pain, decreasing complications and improving cosmesis. Any study report case in wichsils cholecystectomy appears like necessary as alternative to open approach.

Clinical Case: A 53 years patient, with symptomatic gallbladder stone disease ultrasound documentated came to our observation. The patient refears from 3 months abdominal pain above all in epigastrium and right upper quadrant that increases after meals. The patient had an history of chronic pain disease for which he underwent to surgical implantantion of a neurostimulator in the right iliac fossa and than in the links one. On the patient's examination were two visible scars in these surgical sites. For these reason a conventional laparoscopic approach was for this patient not available. The cholecystectomy eas performed through sils approach. The postoperative was regular. The patient was discharged two days after from the hospital. Histological exam showed a scleroatrophic chronic cholecystitis.

Discussion: As a novel technique, cholecystectomy via SILS includes some advantages of its own however, no studies have showed the superiority in front of the conventional one in terms of post-operative pain, infection, herniation. The current opinion is that sils approach is often used just for the absence of visible scar. Our case showed that in selected cases sils approach can be the only possibility for mini invasive approach.

Conclusion: SILS is a feasible technique and represent a good alternative to conventional approach for cholecystectomy. In selected casescan be the only possible mini invasive approach in front of open surgery.

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Incidental Thyroid Microcarcinoma and Breast Cancer: A Case Report and Review of Literature

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Background: Many studies have reported an association between breast cancer and thyroid disease, in particular autoimmune thyroid disease in patient with breast cancer, but the relationship and coincidence of breast cancer with thyroid disorde is not clear.

Clinical Case: A 68 years old woman underwent total thyroidectomy for goiter and subclinical hyperthyroidism, during patient's examination a suspected breast node on the right side was found and confirmed by imaging. The byoptic exam was positive for intraductal cancer, confirmed by the definitive hystologie. The thyroid's hystologic exam was positive for incidental microcarcinoma. Post operative was regular and without complicance.

Conclusion: The higher association between thyroid disease and breast cancer has to be consisered in the management of the patients. This may improve an earlier diagnosis of a second tumor.

About the common aetiologic features and the plausible mechanisms of association, these should be evaluated in a larger cohorts of patients.

Multicentric trials are necessary also for the planning of therapeutic approach.

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pN Status in Adenocarcinoma of the Distal Oesophagus and Cardia (ADOC)

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Objective: Adenocarcinoma of the distal oesophagus and cardia (ADOC) are grouped among the thoracic tumors according to the TNM 7th ed., however controversy is pending on the unique or dual pathogenesis (GORD or gastric-like cancerogenesis). We investigated the pathways of lymphatic spreading in two cohorts of ADOC with or without Barrett's metaplasia.

Methods: ADOC + Barrett's (group 1) was diagnosed in 54 (subtotal oesophagectomy and oesophagogastrostomy at the neck or chest dome); no Barrett's was detected in 140 ADOC (group 2), (oesophagectomy at the azygos vein + total gastrectomy with Roux oesphago-jejunostomy). All 194 cases, were approached through a right thoracotomy and upper laparotomy. Radical lymphadenectomy (stations 4L/R–3–4–7–10–8–9–15–16–17–18–19–20 TNM 7th ed. + pancreatic and pyloric nodes) was identical in both procedures except for the greater curvature stations.

Results: Histology confirmed the preop. Barrett-non Barrett grouping. Groups 1 and 2 were not different ($p > 0,05$) for sex, age, mortality, morbidity, R0 resection rate and grading. They were different ($p < 0,05$) for the number of patients with positive nodes (27/54 50% in group 1 and 98/140 70% in group 2), stage 1 (13/54 24% in group 1 and 4/140 3% in group 2), stage 3a–4 (5/54 9% in group 1 and 44/140 31% in group 2). Median number (IQR) of resected nodes was 29 (15–36.5) in 1 and 30 (20–40) in 2 ($p = .51$). Distribution of pN+ and site of recurrence are reported in table 1. Survival of group 1 and 2 at 5yrs is 42%, at 10yrs is 41% for group 1 and 36% for group 2 (log-rank $p = 0,679$).

Conclusions: ADOC with Barrett's spreads preferentially to the thoracic stations opposite to ADOC without Barrett's which involves mostly perigastric nodes comprising the greater curvature's in 16.5%. The role of total gastrectomy should be questioned. These data deserve further investigation to improve surgery but possibly also surveillance programs.

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The Early Chest CT Scan in Post-Surgical Follow-Up of Non Small Cell Lung Cancer (NSCLC)

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Introduction: An early post-operative chest CT scan has been recently introduced in the guidelines for the follow up of patients submitted to curative surgery for NSCLC. Purpose of the test is to provide the post surgical morphological status of the chest, to facilitate the diagnosis of recurrence and second primary malignancies (SPLC) during follow up. In the late nineties, our group adopted the policy to include the early chest CT scan in the systematic follow-up protocol of patients submitted to radical resection for lung cancer. The aim of this retrospective study is to evaluate the efficacy of early post operative CT scan in detecting early recurrences or SPLC.

Methods: In 97 patients (study group, SG) submitted to radical resection for NSCLC from 1992 to 2001, one early chest CT scan (with contrast agent) was performed within 90 days from surgery, in addition to the standard follow-up protocol that included yearly chest CT scans. Recurrence and survival data were com-

pared with a control group (CG) of 317 patients operated upon and followed-up between 1985 and 1996.

Results: Local recurrence was detected in 52% of patients from CG and in 70% of patients from SG, mean disease free period was 47 months in patients from CG and 9.8 months in patients from SG ($p < 0.05$). Distant recurrence was detected in 28% of patients from CG and in 17% of patients from SG. Local and distant recurrence were detected in 7% of patients from CG and in 13% of patients from SG. Survival since detection of recurrence was significantly longer in SG ($p = 0.05$). Survival since first surgery, in patients with recurrence was not significantly different between the two groups ($p = 0.302$).

Conclusions: Local recurrences were diagnosed earlier in SG than in CG; the longer survival in SG could be due to the earlier diagnosis, not necessarily to an effective result of treatment (lead time bias). The early chest CT scan follow-up protocol should be further investigated, possibly in comparison with CT-Pet scan. At the moment it could be useful in controlled studies, aiming at evaluating new techniques of treatment of local recurrences.

Table 1. (for Abstract 113)

		Group A		Group B	
Mean age (years-range)		53 (23–83)		53 (20–83)	
Surgical procedures	Standard Nissen Collis Nissen	65 (79%) 18 (21%)		55 (91%) 13 (19%)	
Followed up patients no (%)		81 (98%)		67 (99%)	
Mean follow up (months) (range)		59 (3–163)		63 (3–180)	
		Preop	Postop	Preop	Postop
Reflux Symptoms (Typical) No (%)	0 (absent) 1 (2–4/mth) 2 (2–4/week) 3 (daily)	1 (1%) 5 (6%) 34 (41%) 43 (52%)	71 (88%) 8 (10%) 2 (2%) 0	2 (3%) 12 (l8%) 24 (35%) 30 (44%)	54 (81%) 12 (18%) 1 (1%) 0
p (preop. vs postop)		p = 0.001		p = 0.000	
Dysphagia no (%)	0 (absent) 1 (2–4/mth) 2 (2–4/week) 3 (daily)	8 (9%) 43 (52%) 28 (34%) 4 (5%)	69 (85%) 10 (12%) 2 (2%) 0	20 (30%) 36 (53%) 11 (16%) 1 (1%)	48 (72%) 16 (24%) 3 (4%) 0
p (preop vs postop)		p = 0.000		p = 0.002	
Dyspepsia no (%)	0 (absent) 1 (2–4/mth) 2 (2–4/week) 3 (daily)	42 (51%) 31 (37%) 9 (11%) 1 (1%)	63 (78%) 10 (12%) 6 (8%) 2 (2%)	59 (87%) 2 (3%) 5 (7%) 2 (3%)	61 (91%) 6 (9%) 0 0
p (preop vs postop)		p = 0.012		p > 0.05	
Esophagitis no(%)	0 (absent) 1 (edema/hist+) 2 (erosion/s) 3 (ulcers/Barrett)	16 (19%) 16 (19%) 39 (47%) 12 (15%)	77(95%) 3(4%) 1(1%) 0	18 (26%) 15 (22%) 25 (37%) 10 (15%)	63 (94%) 2 (3%) 2 (3%) 0
p (preop. vs postop)		p = 0.004		p =0.000	
Chronic Cough No (%)	0 (absent) 1 (mild) 2 (moderate) 3 (severe)	–	–	0 17 (25%) 35 (51%) 16 (24%)	57 (85%) 9 (14%) 1 (1%) 0
p (preop. vs postop)				p = 0 000	
Global Outcome No (%)	0 (excellent: RSO, DO. EO) 1 (good: RS1,D1,E1) 2 (fair: RS1–2,D2,E1) 3 (poor; RS2–3,D2–3;E2–3)	51 (63%) 24 (30%) 6 (7%) 0		38 (57%) 18 (27%) 4 (6%) 7 (10%)	
p (group A vs group B)		p>0.05			

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Effectiveness of Antireflux Surgery (Fundoplication) for the Cure of Chronic Cough ± Associated with GOR Symptoms

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Objectives: The outcome of surgical therapy for atypical extra-oesophageal symptoms allegedly secondary to GORD is controversial. Aim of this study was to assess the results of antireflux surgery in patients affected by 1) typical, 2) typical + atypical, (chronic cough), in whom a dedicated preoperative work up was performed.

Methods: Between 1995–2010, 151 patients with GORD-related typical and/or atypical symptoms were submitted to antireflux surgery. 100% preoperatively underwent semi-quantitative evaluation of typical/atypical symptoms, chronic cough and oesophagitis, barium swallow, endoscopy and histology and oesophageal manometry, (24 hour pH-recording or intraluminal impedance/pH monitoring system in the absence of gross oesophagitis). In addition, patients with chronic cough underwent chest HRCT scan, methacholine challenge test and spirometry. Surgery was performed exclusively on patients positive for GORD and negative for pulmonary diseases. Preoperative tests for GORD were repeated at follow-up.

Results: Patients were ordered into two groups: A) 83 patients with typical symptoms only, B) 68 patients with typical symptoms and chronic cough. See table for preoperative clinical and instrumental assessment, type of surgery, morbidity, mortality, follow up and outcomes. In both groups, antireflux surgery demonstrated to significantly improve typical symptoms. The global score for outcome showed no significant differences between group A and B. In group B, antireflux surgery significantly improved chronic cough as well.

Conclusions: The preoperative work up was highly effective in selecting patients for antireflux surgery which achieved very satisfactory results in the treatment of GORD and GORD-related chronic cough.

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Preventing Seroma Formation After Axillary Dissection for Breast Cancer: A Randomized Clinical Trial

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Background: Seroma formation after axillary dissection remains the commonest early sequel to breast cancer surgery. Different surgical approaches have been performed to reduce seroma collection. We therefore aimed to assess the outcome of patients operated on with the use of ultrasound scalpel according to a standardized operative technique before accepting it as a routine procedure.

Methods: A randomized controlled trial was designed to compare the outcome of patients undergoing breast surgery and axillary dissection using either standard scalpel blades, scissors, ligations and electrocautery or the ultrasound scalpel only. Each arm of the trial consisted of 30 patients.

Results: A statistically significant benefit in terms of axillary and chest wall drainage volume, number of axilla seromas, intraoperative bleeding, and hospitalization stay was recorded in the harmonic scalpel group. No significant differences were found between the two groups in terms of operative time. Finally, no postoperative hematoma, wound infections and chest wall seroma were observed.

Conclusions: Use of the harmonic scalpel was shown to reduce the magnitude of seroma in axilla and hospitalization stay. The harmonic scalpel can be used alone in axillary dissection with a safe and effective hemostasis. Our results must be confirmed by larger series.

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Titrated Safe Extubation as Alternative to Temporary Tracheostomy in Post-Thyroidectomy Acute Respiratory Failure

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Background: The post-thyroidectomy acute respiratory failure (ARF) is correlated to the palsy of recurrent nerve or to the periglottic or vocal cords edema due to surgical manipulations. ARF occurs in 3% of thyroid surgery patients(1). In these cases it is need to place a tracheostomy (TS)(2) or a less invasive management. TS is recomanded to manage the airways in patients (pts) who requires prolonged intubation (>9 days) in ICU. Moreover TS could increase risk of infections and prolonge patient ICU stay. The titrated safe extubation (TSE) has been reported as a new approach in case of iatrogenic upper airways obstruction. TSE is used in airway management for critical illness, it consists in replacing the orotracheal tube with a cuffless small-size nasotracheal one. As the TS, the TSE allows rapid stabilization of the airways, but in a less invasive way. The aim of our study is to check the efficacy of TSE in post-thyroidectomy ARF.

Materials and Method: From Janaury 2005 to Janaury 2010, 1136 thyroid surgery pts have been treated in our University Hospital, 8 of these were admitted in our ICU for ARF. Symptoms were tirage, hypoxemia and dyspnea that required re-intubation and ICU recovery for post-operative ARF diagnosis. Safe extubations with fiberbronchoscopy (FBS) and topic anesthesia were performed within 24 hours. After removing the fiberbronchoscope, a nosetracheal uncuffed tube (I.D. 4, 5 mm) (NT) was fed in trachea on guidewire, and it was left with a phonetic valve, resolving airway obstruction. During TSE inspiration occurred throught the NT while exalation happened outside it, allowing spontaneous breathing. A nasogastric tube was placed for enteral nutrition and a corticosteroid aerosol-therapy was administred.

Results: None of these pts has undergone TS. We checked airways condition every 48h. The small diameter of NT together with the therapy enabled the progressive reduction of the inflammatory oedema, with fast recovery from airway obstruction. All pts were finally extubated between the 4th and the 8th post-operative day.

Conclusion: In our initial experience, NT resulted safe and well tolerated without complications related to the procedure. It seems to be a less invasive alternative than TS in transitory airway obstruction management, avoiding prolonged orotracheal intubation with sedation, and reducing ICU stay. However it will be validated by a further multicentric study.

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Gastropleuropericardial Fistula Following Combined Radiation and Chemotherapy for Lung Metastases

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Background: Gastro-pleuro-pericardial fistula represent dangerous situations. The mortality rates reported for gastropericardial fistula are as high as 85%. We report a case of a gastropleuropericardial fistula in a 51 year old male treated with radiotherapy and Sunitinib (Sutent®), a novel tyrosine-kinase inhibitor, for lung metastases from renal cell carcinoma.

Case Report: Our patient was then submitted to stereotactic radiotherapy directed to the major lung lesion, located in the left inferior lobe (36 Gy at isodose of 70%) and chemotherapy with Sunitinib (Sutent®), an oral multiple tyrosine-kinase inhibitor, with stabilization of lung metastases. On admission, the patient presented thoracic pain, dyspnea and tachycardia. Upper endoscopy confirming the presence of a perforated peptic ulcer of the gastric fundus. The CT scan showed a large left pleural effusion with loculations and septations, atelectasis of the lower left lobe and a fistula between gastric fundus, left pleura and pericardium with a moderate compression on left ventricle.

Discussion: In this case gastropleuropericardial fistula originating from the perforation of a peptic ulcer of the gastric fundus, the combined action of radiotherapy directed to the metastases at the base of the left lung and Sunitinib based chemotherapy may have predisposed our patient to the development of this fistula. In first time we opted for total parenteral nutrition to maximize general conditions, and then was subjected to surgical exploration.

Conclusions: We recommend a strict follow-up also in case of metastases near the base of the lungs, and we stress the importance of an accurate clinical and radiological monitoring also in case of long-term treatments.

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MPI Score: Risk Factors for Postoperative Mortality in Patients with Primary Visceral Perforations

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Background: Visceral perforations are one of the main causes of death in emergency surgery, depending on patient's general conditions, delay of diagnosis, causes of perforations and location in gastrointestinal tract.

The aim of the present observational study was to analyze the clinical outcome in a consecutive series of patients with primary or postoperative gastrointestinal tract perforations.

Methods: Data regarding 174 patients (93 males and 81 females, median age 70) with gastrointestinal perforations requiring urgent operation between october 2000 and april 2011 were stored on database. Clinical presentation, patient's general conditions, site and cause of perforation, surgical features and postoperative course were analyzed. We used the MPI (Mannhein Peritonitis Indiex) score to classify and predict patients at high risk of postoperative mortality.

Results: The main causes of primary perforation were neoplasms (25 cases), diverticular disease (24 cases), peptic ulcer (21 cases). Distal colon and rectum was the most common site of perforation (29%). Overall postoperative mortality was 23%. Ischemic and traumatic perforations were associated with increased risk of mortality. MPI score over 29 points is correlated with high mortality rate and age of patients was the most important single factor influencing mortality, independently from the cause and site of perforation.

Conclusion: Visceral perforations are a frequent cause of urgent operation in general surgery, and are associated with high mortality rates. Age of patients is the most important predictor of clinical outcome, and prognosis is particularly severe in octogenarians. MPI and MOF score will predict the outcome in patient with peritonitis by visceral perforations.

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Tricks & Tips: The 'Slingshot' Capsular Flap to Redefine the Inframammary Fold

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Background: A well-defined inframammary fold (IMF) is crucial to provide a good and long lasting symmetry in both cosmetic and reconstructive breast surgery. The most frequent cause of reoperation in these procedures is the malposition of the implants or the loss of symmetry in the cases of unilateral reconstruction because of the displacement of the fold. Unlike the cra-

nial displacement of the IMF, the caudal displacement is more difficult to correct. Many Authors have already described different methods to improve IMF anatomical features. This article introduces a new technique to redefine the IMF by means of a capsular flap used in a 'slingshot' fashion.

Materials and Methods: Thirty consecutive patients affected by lower dislocation of the IMF have been treated with the slinghshot capsular flap. 26 were reconstructive procedures: in 23 cases following the expander malposition, in 3 cases due to definitive implant dislocation. The other 4 cases were IMF asymmetry in cosmetic surgery. In all patients the capsule has been secured at the level of the lower margin of the controlateral IMF. The anterior capsular flap, after being carved, has been advanced cranially on the chest wall in a 'slinghshot' fashion and anchored to the periosteum of the above rib. Then an overlock running suture has been performed between the posterior and the anterior capsular flaps to improve stability.

Results: A good and long lasting definition of the inframammary fold has been achieved in all patients and the results were stable over time with a follow up of 3 years.

Conclusions: The 'slinghshot' capsular flap should be considered as a valid option for a good long lasting symmetry in both esthetic and reconstructive breast surgery to redefine the IMF.

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The Versatility of Latissimus Dorsi Flap in the Salvage of the Heterologous Breast Reconstructions

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Background: The versatility of latissimus dorsi flap in the salvage of the heterologous reconstructions with mechanical or radio-induced complication is examined in this retrospective review of our 10-years experience.

Methods: Twenty-eight patients were divided into three groups: (1) 15 patients with mastectomy and immediatly expander reconstruction and radiation; (2) nine patients with previous quadrantectomy and radiotherapy who underwent salvage mastectomy after local recurrence and immediatly expander reconstruction; (3) four patients with primary radical mastectomy without radiation.

Results: The most common primary complications were capsular contracture in 10 patients (66.5%) and radiodermitis in six patients (40%) for group-1; cutaneous fistula in seven patients (77.5%), with a rate reduction of capsular contracture observed in 3 patients (33.3%) for group-2; and mechanical and heterogeneous complications for group-3. Donor-site complications after latissimus dorsi flap included one seroma and one pathological healing, both in group-1. Recipient site complications were observed in seven patients (28%): in group-1, capsular contracture in three patients (20%), periprosthetic infection in one patient (6.6%), periprosthetic seroma in one patient (6.6%); in group-2, partial flap necrosis in one patient (11.1%) and cutaneous fistula in one patient (11.1%) that required the prosthesis removal, therefore representing the single failure of the reconstructive process. We have not observed complications in group-3 patients. Five patients with these complications were smokers. These complications occurred in six patients with musculocutaneous flap (85.7%) and in one patient with muscular flap (14.3%). Cosmetic result rated by a single surgeon was excellent in eight patients (28.6%), good in 18 patients (60.8%), sufficient in two patients (7%) and insufficient in one patient (3.6%).

Conclusion: This study has demonstrated that the latissimus dorsi muscular or musculocutaneous flap is an effective, rapid and simple procedure, allowing the salvage of complicated heterologous reconstructions. This technique also produces excellent or good cosmetic results, stable over time.

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The Expression of Estrogen Receptors in Breast Implant C Capsules Correlates with the Number of Myofibroblasts and the Time from Implantation

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Capsular contracture complicates 1.3 to 30% of breast implantations. Histologically, capsular tissue presents as a three-layered structure, with the middle layer being the most important in the pathogenesis. Myofibroblasts provide a sustained force to decrease the surface area of the capsule as the collagen matrix mature. In fibrotic processes, 17β-estradiol increases the contraction of myofibroblasts and the production of Transforming Growth Factor-β, one of the main stimuli for the transition from fibroblast to myofibroblast. The study enrolled 16 women (17 capsules) who underwent expander removal or implant substitution. Tensile tests, immunohistochemistry and immunofluorescence for Estrogen Receptor-alpha (ER-α), Estrogen Receptor-beta (ER-β) and alpha-Smooth Muscle Actin (α-SMA) were performed. We observed that myofibroblasts may express both receptors. In the middle layer we found: positive correlations between the ratio of ER-α positive cells/ER-β positive cells and α-SMA positive cells ($p < 0,01$) and between ER-β positive cells and implant duration ($p < 0,05$); negative correlations between ER-β positive cells and α-SMA positive cells ($p < 0,01$) and between α-SMA positive cells and implant duration ($p < 0,05$). Results from the uniaxial tensile tests were reported as Young's modulus and showed a positive correlation between samples stiffness and Baker score.

The finding that the ratio of ER-α/ER-β positive cells correlated positively with α-SMA positive cells and that ER-β positive cells correlated negatively with α-SMA positive cells suggests that the expression of ER-α is more associated to myofibroblast phenotype, while ER-β to non-contractile fibroblasts. The positive correlation between ER-β positive cells and the time from implant placement and the negative correlation between α-SMA positive cells with both ER-β expression and implant duration, suggests that this receptor is associated to the time-dependent regression of myofibroblast phenotype.

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Treatment and Prevention of Early Stages Pressure Ulcers by Autologous Adipose Tissue Grafting

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Detecting and assessing pressure ulcers (PUs) in an early stage allow patients to receive adequate treatment to avoid further development of them. Ultrasound evaluation seems to be the most practical method to achieve this goal; after that, various treatment are applied to prevent ulcer progression but no one is totally effective. Furthermore, the recognition of fat regenerative properties has driven further examination into the potential uses of fat and adipose-derived stem cells in clinical situations. With our prospective study we want to introduce a new method to cure and prevent the worsening of early stage ulcers by autologous adipose tissue grafting. The authors selected 13 patients who showed clinical and ultrasonographycal evidence of stage 'unstageable' and stage I sacral and/or ischial PUs. Values of skin thickness, layered structure, fascial integrity, subcutaneous vascularity were recorded both on the PU area and on the healthy trochanteric one, which was considered control region. Average values for each parameter were calculated. Treatment we propose was performed on all patients who were followed-up for three months, after which the same evaluation was accomplished. Data measured before and after treatment were compared. After 3-months follow-up period the stage of PUs improved in all cases compared to baseline. Clinical findings and the abnormal signs recognized in ultrasonography on PUs such as reduction of cutaneous and subcutaneous thickness, uncleared layered structure, discontinuous fascia and decrease of subcutaneous vascularity compared to that of the underlying muscle, had all changed to almost those of control region. The preliminary results stress that the use of autologous adipose tissue grafting was believed to really contribute to prevention and treatment of early stages PUs. Unfortunately the closed number of patients suggest that further studies involving a large number of patients are needed to assess the effectiveness of this method.

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A Case of a Giant Paraesophageal Type IV Hiatus Hernia Presenting as an Emergency

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Paraesophageal hiatal hernia accounts for only five per cent of all diaphragmatic defects but is a potentially dangerous lesion. Herniation of the entire stomach, at times accompanied by the omentum, transverse colon, and small bowel, may occur in some patients, and incarceration and strangulation may be the result. We report the case of a 82 y.o woman who underwent repair of large paraesophageal hernias, in emergency. The patients presented to the local Emergency Department with symptoms of fever, dispnea and signs of myocardial ischemia. She complained also from many months epigastric pain, bloating, and dyspepsia. Her medical history included chronic ipertensive cardiomiopaty and BPCO. On chest radiography signs of diaphragmatic hernia were present and spiral computed tomography showed a large hiatus hernia with complete herniation and volvolus of the stomach, and traslocation in the thorax also of the transverse colon and ileus, with dislocation and compression of the heart and of the lungs. The operations through a left thoracotomy, necessary to excise the large hernia sac, which was densely adherent to the lung and mediastinal structures included reduction of the hernia and repair of the hiatal defect. The clinical features of large paraesophageal hernias containing intrathoracic abdominal viscera, as well as the technique of operative repair, are presented. The question of operation approach (thoracotomy or laparotomy) is a matter of continuous discussion, each of them having its advocates.

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Management of Microanastomosis in a Patient Affected with Mönckeberg Medial Calcific Sclerosis

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Background: Anterolateral thigh flap (ALT) originally described as a fasciocutaneous flap nourished by a septocutaneous perforator of the descending branch of the lateral circumflex

femoral artery, the design of the flap significantly depends on the course and location of the cutaneous vessels, the anatomy of which can vary considerably.

The Mönckeberg medial calcific sclerosis is a degenerative disease affecting the limbs and rarely in the genitalia tract of subjects over 50 years.

Case Report: A 43-year old Caucasian male came to our observation with a lower limb trauma. He underwent a ALT free flap. Unfortunately during surgery he was found to be affected with Mönckeberg's sclerosis.

Discussion and Conclusion: The incidence of the disease in adult patients, for the possible vascular implications, suggest us to include the Mönckeberg's sclerosis of the media among risk factor of free flap failure.

According to our experience clean the vessel up and irrigate it with heparin could be an operative algorithm for the management of the anastomosis and is suggested to avoid flap failure. In addiction it is recommended the use of 7/0 suture to reduce the number of stitches.

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Mini-Invasive Surgery in Urgency

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Introduction: The laparoscopic approach and thoracoscopic have become a gold standard for many pathologies. Progressively it caught on the use of the laparoscopy in emergency too, over all for diagnostic purpose: nowaday the mini-invasive surgery in emergency has taken a therapeutic and diagnostic function.

Materials and Methods: Till 2007 to 2010 c/o the UO of General Thoracic Surgery of the Ospedale Ceccarini in Riccione, 6335 patients have been submitted to a surgery and 2277 of these patients (35%) in urgency. The 44% of the emergencies (1016 patients) have been done by a mini-invasive approach: 659 (28%) have been done by laparoscopy and 357 (16%) by thoracoscopy.

Results: The thoracoscopies (357) have been done when there was a pleural effusion and/or hemothorax. The cholecystectomies were 246. The appendicectomy was done in 341 patients, the suture of gastroduedenal-ulcer in 11 cases, the suture of broken ovarian cyst in 13 cases. In 8 cases of intestinal occlusion we have done a lysis of adhesions, in 4 cases a laparoscopic toilette of endoabdominal waste complication previous laparoscopic operations. In 2 cases of complicated peristomal hernia we have done an alloplastic. In 1 case we have done a left VL hemicolectomy for a stenosis and bleeding neoplasia. In 1 case of a perfored diverticulitis we have done a Hartmann laparotomy. The rate of lapartotomic/thoracotomic conversion was of the 14% (143 patients).

Conclusions: In accordance with the literature we think that the mini-invasive approach is suitable and preferable for the cases of gastro-duedenal ulcer, appendicitis, cholecystitis, abdominal ache of ndd, gynecologic pathology, pleaural effusion.

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Comparison between Metachronous Lung Tumours and Lung Cancer Recurrences: Preliminary Study

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Objective: Our experience about surgical treatment and follow up of metachronous tumours and pulmonary metastasis from NSCLC.

Methods: The 18 patients who underwent a second pulmonary resection for a second primary lung cancer (Group 1) or pulmonary recurrence (Group 2) between 2002 and 2009 were reviewed. Main criteria of insertion in Group 1: different hystology; same hystology with disease-free interval ≥ 4 years; we excluded loco-regional recurrence in nodes and/or on bronchial stump and N+ with common lymphatic drainage.

Results: The selected cases represent the 3,2% of all the consecutive majour lung resection for NSCLC in the same period (552).

Group 1: 12 patients (first surgical treatment: 10 lobectomies, 2 pneumonectomies; desease free time: 82,8 months (range 8–120).

Secondary resection: 6 lobectomies (2 omolateral), 4 controlateral segmentectomy and two completation pneumonectomies. Actuarial survival: 80%; follow-up: 19,5 months (range 9–36).

Group 2: 6 patients (first surgical treatment: lobectomy in 4 cases, 1 bilobectomy and 1 sleeve resection; disease free time average: 9 months (range 8–12). Subsequent lung resection: 5 completion pneumonectomy, 1 lobectomy. Actuarial survival: 66%; follow-up: 16,3 months (range 3–36).

Conclusions: Iterative resection for lung cancer when feasible can be a therapeutic chance in selected patients with uncompromised respiratory function and no evidence of distant spread disease.

We didn't notice statistically relevant differences on survival ($p = 0,197$) between the groups we compared. This is probably due to the limited number of records we achieved for the rarity of finding a resectable second lung tumour.

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Pulmonary Resection after Pneumonectomy: A Case of Synchronous Lung Exeresis for Bilateral Primitive Bronchial Cancer

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Objective: The current use of Multislice CT in pre- and post-surgery screening for a Bronchial Cancer NSCLC has increased the diagnosis of contralateral lung isolated lesions which often reveal themeselves as metachronous or synchronous tumour. The recent tendency is to resect sequentially the two lesions, even when the first lung resection is a pneumonectomy. We describe our institutional experience.

Materials and Methods: We report a case of a left lung cancer infiltrating lower pulmonary artery and and synchronous right neoplasm treated by left pneumonectomy and contemporary middle lobe segmentectomy via sterno-thoracotomic access in a 68-old man. The patient had no major comorbidities and underwent routine pre-operatory cardio-respiratory examinations including pulmonary function stress test, DLCO, Lung Perfusion Scintigraphy.

Results: Double synchronous lung resection resulted in complete cancer exeresis with free- margins on both neoplasms. No intra-operatory complications occourred. Post-operative course was characterized by slow respiratory weaning that required a temporary tracheostomy in VIII day and mechanical ventilatory assistance till the XV post-operative day. The patient is alive one year later.

Conclusions: Bilateral lung cancer may receive benefit by an aggressive surgical approach. The limited additive exeresis procedures (segmentectomy, wedge resection) after pneumonectomy may be realized safely in selectioned patients and may achieve oncological radicality criteria when the second tumour isn't considered the expression of metastatic spread disease.

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Is it More Favorable a Metachronous Lung Cancer or a Pulmonary Metastasis?

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Objective: Our experience about surgical treatment and follow up of metachronous tumours and pulmonary metastasis from NSCLC.

Methods: The 18 patients who underwent a second pulmonary resection for a second primary lung cancer (Group 1) or pulmonary recurrence (Group 2) between 2002 and 2009 were reviewed. Main criteria of insertion in Group 1: different hystology; same hystology with disease-free interval ≥ 4 years.

Results: The selected cases represent the 3,2 % of all the consecutive major lung resection for NSCLC in the same period (552). Group 1: 12 patients (first surgical treatment: 10 lobectomies, 2 pneumonectomies; desease free time: 82,8 months (range 8–120). Secondary resection: 6 lobectomies (2 omolateral), 4 controlateral segmentectomy and two completation pneumonectomies. Actuarial survival: 80%; follow-up: 19,5 months (range 9–36). Group 2: 6 patients (first surgical treatment: lobectomy in 4 cases, 1 bilobectomy and 1 sleeve resection; disease free time average: 9 months (range 8–12). Subsequent lung resection: 5 completion pneumonectomy, 1 lobectomy. Actuarial survival: 66%; follow-up: 16,3 months (range 3–36).

Conclusions: Iterative resection for lung cancer when feasible can be a therapeutic chance in selected patients with uncompromised respiratory function and no evidence of distant spread disease. We didn't notice statistically relevant differences among the groups we compared because of the limited number of records we gained due to the rarity of a resectable second lung tumour.

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Carotid Restenosis: Incidence and Role of Risk Factors

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Objective: We evaluated the incidence of restenosis after carotid surgery and the role of risk factors.

Materials and Methods: From January 2007 to April 2010 we recorded 233 patients, middle age 73.72+/–8.23, 170 males (73%) and 63 females (27%), with the following risk factors: diabetes 43.7%, hypertension 80.2%, smoke 63.5%, dyslipidemia 45.9%, homocysteine > 15mmol/L 53.5% CRP > 3.5%mg/dl 35%, atrial fibrillation 5.5%, chronic renal failure 5.5%. The indications for treatment were: symptomatic stenosis in 128 patients (55%); preocclusive stenosis in 4 patients (1.71%); restenosis > 80% in 14 patients (6%), 10 restenosis of those (4.2%) previously treated in other centres; asymptomatic stenosis in 87 patients (37.3%). The restenosis occurred in 11 pts after eversion CEA (5.4%); 2 early restenosis after CAS (0.8%); 1 early restenosis of the distal anastomosis after bypass (0.4%). We performed 202 eversion CEA (86.6%), 4 CEA plus patch (1.7%), 8 CAS (3.4%), 12 carotid bypass (5.1%, vein in 11 cases, PTFE in 1 cases). The treatments of restenosis were:12 bypass, 1 CAS, 1 patch of the distal anastomosis of bypass.

Results: Median follow-up was 19 months, we recorded 15 death for not neurological events,2 occlusion after eversion CEA (0.9%), 4 restenosis > 80% (1.2%): 2 after eversion CEA (0.9%);1 early restenosis after CAS (12.5%);1 early restenosis of the distal anastomosis after bypass (8.3%). Homocysteine and CRP were 17.64±5.22 *vs* 17.88±7.16, and 4.88±4.57 *vs* 6.31±6.10 respectively in patients with and without restenosis (P = .55; OR = .53). A trial fibrillation and hypertension were associated to late death (respectively P = .007, OR = 5.78; P = .0005; OR = .16).

Conclusions: The incidence of restenosis was 2.1% in our series; early restenosis was more frequent than late restenosis; restenosis after CAS was more frequent than after CEA (P = .03); there was not a significant relationship between restenosis and risk factors.

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From the Radial Forearm Flap to the ALT: Our Reconstructive Evolution of Oropharyngeal Region

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Objective: The free flaps are the gold standard in reconstruction of oropharyngeal region. If at first the radial forearm fasciocutaneous flap (RFFF) and Fibula free flap were often the first choice, now the ALT free flap achieves popularity for this kind of reconstructions. We report our experience in the microsurgical reconstruction of the oropharyngeal region comparing the use of RFFF with ALT.

Methods: From 2003 to 2010 were treated 48 pz affected by squamous cell carcinoma of the oral cavity. 26 pz were treated with RFFF and 22 pz with ALT. In all cases the microsurgical flap dissection was performed simultaneously with the demolition phase; the recipient sites were the tongue, the mouth floor, the pharynx, the palate. In the RFFF set up was always performed skeletonization of the cephalic vein. The RFFF was used to reconstruction the soft tissue defects ≤ 5 cm, while the ALT to reconstruction the defects ≥ 6.8 cm.

Results: Flap success was 97% in the ALT and 92% for RFFF. The average RFFF size was 5x8 cm, while the ALT was 7x12cm. Operative time was significantly shorter in RFFF reconstructions. In ALT cases the donor site was closed directly and in RFFF donor site closure was carried out with skin grafts. No major complications were seen.

Conclusions: The results obtained with the ALT are comparable to RFFF. Thanks to the minimum donor site morbidity, the long pedicle and the ALT softness, we consider the ALT as ideal choice for reconstruction of oral cavity.

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A New Flow-Through Flap Model in the Rat Based on Iliolumbar Artery

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Background: This study describes a free flow-through flap model in the rat for use in the evaluation of the physiologic and hemodynamic characteristics of this type of flap in clinical practice, totally set on the back. The flow-through flap concept was first reported by Soutar, because the soft tissue and vascular defects can be reconstructed simultaneously, the concept has gained wide acceptance. The flow-through flap model in the rat was first reported by Ozkan They transferred a flow-through superficial epigastric flap to the contralateral groin. The hemodynamic changes resulting from this flap harvest are a problem and the autocannibalization tendency of the rat makes difficult a long-term evaluation of the flap.

Materials and Methods: Twenty Wistar rats weighing 250–300 g were used in our experiment. The experimental design consisted of two groups. In the experimental group (N = 10) The flaps were harvested and anastomosed in end-to-end fashion between the proximal and distal stump of the axillary artery (the so-called flow-through fashion). All venous anastomoses were performed in an end-to-end fashion. In the second group (control subgroup N = 5) the flap was harvested in the same manner and anastomosed in standard free-flap procedure; in the 5 rats anastomosis was not performed between the flap and the recipient site in the remaining (graft subgroup).

Results: Survival of the flap was evaluated on postoperative day 7 by direct observation. The results showed that all flaps survived in the experimental group and the conventional free-flap subgroup of the control group, whereas in the graft subgroup, all flaps underwent total necrosis.

Conclusion: The flow-through iliolumbar artery flap for the rat is a simple and reliable model for future physiologic and pharmacologic studies. flap model on the dorsum of the rat which is well protected from autocannibalization and environmental conditions. This totally dorsal flap model also allows the flap monitoring without manipulation of the animal.

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New Supermicrosurgery Flap Model: Pectoral Flap Anastomosed Dorsally on the Controlateral Thoracic Vessels

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Background: Supermicrosurgical techniques developed for the anastomoses less or equal to 0.5mm, despite the increasing popularity of supermicrosurgery, surgeons have few laboratory

flap models they can use to develop their supermicrosurgical skills. This study aims to investigate a new model of supermicrosurgical training and research completely back to allow a long-term flap monitoring.

Materials and Methods: Ten arterial anastomoses of the lateral thoracic artery (less or equal to 0.5mm) were performed consecutively in ten rats by the same operator, with standard microsurgical set of instruments, using the 11–0 nylon for the open guide suture technique. The immediate patency and flap survival on postoperative day seventh was assessed. The duration of each anastomosis was measured.

Results: The mean diameter of the arteries was 0.4mm. The average time for each anastomosis was 30 minutes with a maximum of 55 minutes and a minimum of 18minutes. The average number of stitches was 5.5. The immediate patency was 100% with a 70% success rate at the seventh day.

Conclusions: There are several applications of supermicrosurgical techniques, especially in hand surgery, lymphoedema surgical treatment and for perforator-to-perforator flaps. This flap model on the dorsum of the rat is well protected from autocannibalization and environmental conditions and also allows a long-term evaluation without manipulation of the animal.

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An Unusual Clinical Presentation of a Primary Soft Tissue Burkitt's Lymphoma

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Objective: The purpose of this case report is to describe the unusual clinical presentation of a unique Burkitt's lymphoma.

Methods: A 68-year-old woman with unremarkable past medical history was admitted to our Department for evaluation of left sacrum-ilium area pain resistant to medical treatment. The patient underwent physical examination, radiographs, Ultra-Sound, CT and MRI of pelvis and sacrum, biopsy of the lesion, total body scintigraphy and PET.

Results: The pain was localized in the left sacrum-ilium area, it was extended to the left buttock and among the sciatic nerve distribution. It was increased by mobilization and the level was considered by the patient to be 10/10 on the Visual Analogic Scale. The patient didn't have any vascular deficit, muscular weakness or sensory loss. Laboratory data revealed mild increase of VES and of lactate dehydrogenase, without any immunosuppression data. Radiographs showed thickened soft tissue without bone involvement at pelvis and sacrum. Ultra-Sound examination showed a heterogeneous mass with a disorganized echotexture. The size was approximately 7 cm high and 6 cm wide. The CT study demonstrated that bone was preserved, and there was neither vascular nor joint involvement. The MRI showed that the mass was infiltrating all gluteus muscles and dislocating laterally the sciatic nerve, without nerve infiltration. The histological results were of a heterogeneous mass of necrotic cells and of B-lymphocytes.

Conclusion: This is the first case of a Burkitt's lymphoma presenting with a pelvic mass originating from the soft tissue, without bone involvement and with as unusual clinical presentation.

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Advanced Colorectal Cancer: When Surgery, When Other Therapies

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Objectives: Recurrences are detected in 40–50% of nearly one million patients who are diagnosed with colorectal cancer world wide every year. Metastases to the liver are found in up to 25% at primary diagnosis and occur during 3 years follow up period in 50–70%.

Surgical resection is currently the only therapy producing long-term survival in patients with advanced colorectal cancer (ACRC).

Material and Methods: From July 1997 to February 2011 we observed 320 patients with colorectal cancer; 298 were operated on primary tumour. Out of these 81(25,3%) developed recurrences (liver, lung, lymphnode, peritoneal, anastomosis, even in combination): 43 synchronous and 38 metachronous.

We divided these patients into 4 groups: Group A: 13 patients (16.0%) were operated only on symptomatic primary colorectal tumor because of their advanced disease.

Group B: 10 patients (12.3%) were operated on the primary tumor and synchronous liver metastases, without neoadjuvant therapy.

Group C: 50 patients (61.8%) were operated on the primary tumor and then underwent neoadjuvant therapy on recurrences with the target to resect recurrence disease.

Group D: 8 patients (9.9%) underwent only neoadjuvant therapy without any intervention on the primitive tumour or recurrence.

Results: Group A: patients had a median survival of 6 months (range 3–13).

Group B: the median survival was 33 months (range 6–78); 2 patients were reoperated on recurrent liver metastases and are still alive after 9 and 14 months.

Group C: 14 patients (28% of group C and 17,3% of total), after down sizing, went to surgery on recurrence with a median survival of 35 months (range 7–101); we are still treating 3 patients with a median survival of 28 months (range 22–38) before recurrence resection.

Group D: 4 patients are currently alive under chemo and biological therapy after a median survival of 20 months (range 6–33).

Conclusions: 14 patients with ACRC (17,3 % in ourseries) have benefited from the progress achieved by neoadjuvant chemo and biological therapy. They have achieved, after resection on recurrence, an even higher median survival than patients operated in the first instance.

In addition to that, the evolution of the GROUP D gives time to the surgeon to evalute the best therapy strategy.

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Choledochal Cyst Disease in Pregnant Woman: A Case Report

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This article describes a 30 year-old pregnant woman who presented with severe abdominal pain, jaundice, and acute pancreatitis. The biliary malformation is shown by the compression beetween uterus and biliary tree.

She had diagnosis of choledochal cyst with Todani classification type I.

Bile duct cysts (BDC) or choledochal cyst, are rare congenital anomalies of the biliary tree, that are characterized by cystic dilatation of the extrahepatic and/or intrahepatic bile ducts.

BDC is associated with biliary stasis and lithiasis, and the whole biliary epithelium is considered a risk for malignant transformation.

A magnetic resonance of the biliary tree was performed, followed by ERCP, for visualizing the biliary morphology.

Extrahepatic cyst excision with cholecystectomy followed by biliary reconstruction with hepaticojejunostomy was performed. Roux-en-Y hepaticojejunostomy (HJ) is infact currently the favored reconstructive procedure after choledochal cysts resection; is also been performed a intraoperative cholangiography.

Histologic result: high-grade dysplasia in charge of the resected bile duct affected by choledochal cyst and gastric metaplasia in the gallbladder load.

We have analized this case according to literature.

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Computed Tomography Scans of Middle Ear Versus Surgical Findings in Chronic Otitis Media

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Objective: We evaluated the data provided by Computed Tomography (CT) scan reports for assessing otologic disease and planning surgery; we also examined their correspondence with surgical findings.

Methods: We retrospectively analyzed preoperative CT reports of 202 patients (57% men, 43% women) aged between 15 and 78 years, suffering from chronic otitis media and underwent radical mastoidectomy (17%), closed (31%) or open (52%) tympanoplasty at the Department of Otorhinolaryngology of Federico II University in Naples between January 2003 and October 2010. We then compared 'quantity' and 'quality' of informations contained in CT reports with intraoperative findings.

Results: Radiologic reports show the presence of cholesteatoma in 28% (intraoperatively found in 69%), defining the remaining 72% as inflammatory tissue. In 50% the involvement of middle ear generally refers to tympanic cavity and/or mastoid, without considerations of single subsites. Ossicular chain is described in 77% (73% intraoperatively), but 69% of reports refer to the whole chain, mentioning each ossicle only in 8%. Alterations in tegmen tympani are overestimated (20% versus 10%), as erosion of labyrinthine structures (18% versus 6%). Involvement of facial nerve canal is underestimated (7% versus 26%). Procidentia of sigmoid sinus is described in 2% (10% intraoperatively); jugular bulb, really high in 2%, is never described. Obstruction of eustachian tube is reported in 3% (21% intraoperatively).

Conclusions: CT is essential to assess chronic otitis media; however insufficient informations should lead to greater cooperation between surgeon and radiologist through more detailed descriptions of the ear to operate or alternative imaging techniques (Magnetic Resonance).

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Induction Radio-Chemotherapy Followed by Surgery for Locally (T3-T4) Advanced Node-negative Non-Small-Cell Lung Cancer: Surgical Outcome and Long-Term Results

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Objectives: The role of induction therapy for locally advanced node negative non–small cell lung cancer (NSCLC) is still controversial. The aim of this observational study is to analyze the impact of the induction treatment (concurrent chemo-radiotherapy, IT) on the survival pattern in T3/T4-N0 NSCLC patients.

Methods: We reviewed the clinical outcome data of 71 patients, observed and treated in the period between 01/1992 and 05/2007. Of these, 31 patients received IT prior to surgery (IT-Group: T3 (#20) and T4 (#11)), and 40 directly underwent surgery as first step therapy (S-Group: T3 (#34) and T4 (#6)). Survival rates between the two groups were compared using the Kaplan-Meier analysis and the Cox proportional hazards models.

Results: Mean age and M/F were 62.5±9.9 and 25/6 in the IT-Group, and 67.7±7.1 and 33/7 in the S-Group, respectively. In the IT-Group, all patients but one (poor clinical conditions) completed the IT treatment (overall toxicity rate = 20%, # 6 patients) and, following clinical re-staging, 27 patients (87%) were operated. A radical (R0) resection was possible in 21 patients (78%). In the IT-Group a complete pathological response (p0) was obtained in 6 patients (22%) where 8 patients ended up in pI-Stage, 7 in pII-Stage and the remaining 6 in pIII-Stage. The overall 5-yr survival (LTS) and disease-free 5-yr survival (DFS) for the entire cohort were 40% and 34%, respectively. No significant differences ($p = 0.960$) were found when LTS in the IT-Group (44%) and in the S-Group (37%) was compared. At the multivariate analysis, the completeness of resection was the only factor that proved to be independently predictive (HR = 5.18; 95% C.I. = 2.55–10.28) while Cox multivariate analysis (on the IT-Group only) confirmed the critical role of the pathological downstaging (HR = 4.62; 95% C.I. = 1.54–13.89). We have in fact observed a clear prognostic stratification according to the pathological staging [p0 = 100%, pI = 63%, pII = 14%, pIII = 0%; ($p < 0.001$)].

Conclusions: A multimodal strategy with induction concurrent chemo-radiotherapy followed by surgery is a safe and reasonable treatment in T3/T4 node-negative NSCLC patients but no clear evidence of prognostic improvement may be assumed yet. Nevertheless, patients with radical resection and/or complete pathological response have a very rewarding survival.

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Different Survival in NSCLC According to Proliferative Indices Values in Radically Resected Stage I

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Objective: To assess the significance of proliferative indices (Mib1, p53, Mitotic Index 'MI', Apoptotic Index 'AI' & Turnover Index 'TI') as prognostic factors after surgery for NSCLC.

Methods: Between 2000 and 2005, 147 patients, surgically treated, for stage I NSCLC, were reviewed. Only patients affected by adenocarcinoma and squamous cells tumors were considered. The pathologist evaluated the Mib1 & p53 expression and the following indices: 'MI', 'AI' and the 'TI' as 3xMI-AI. Patients were divided according with the median value of each index. Survival was also evaluated according: age, sex, T status, pleural infiltration, histology and grading.

Results: Between the 147 patients only 139 were considered for the study (3 lost at follow up and 5 not tumour related dead). Age, sex, T status, histology, visceral pleural infiltration & type of resection resulted not significant in affecting the survival. Also the 5yrs survival rates according with MI, AI and TI were not significant ($p = 0.83$, $p = 0.79$ and $p = 0.62$ respectively). The same index was than used in adenocarcinoma and squamous group separately. Despite no differences in 5yrs survival were found among the squamous tumors, in the adenocarcinoma series a lower 'TI' was significantly associated with a better 5yrs survival ($p = 0.006$) as well as the AI ($p = 0.033$) and the p53 expression is singnificantly higher in the worst prognostic group ($p = 0.024$).

Conclusions: Our results confirms that 'PI', 'AI' and particularly the 'TI' can be applied as prognostic indicator for the pulmonary adenocarcinomas confirming their different behaviour respect the squamous and stressing the importance of an histology tailored treatment.

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The Prognostic Significance of Proliferative Indexes in Surgically Resected IIIA-N2 NSCLC after Induction Chemotherapy

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Objective: Focus of this study is to assess the prognostic significance of Mib1 expression, Mitosis (Mi) and Apoptosis (Ap) in

tumour residual cells after induction chemotherapy in IIIA-N2 patients surgically resected.

Methods: Between January 2002 and November 2008, 50 consecutive patients, 39 male, affected by stage IIIA-N2 NSCLC histologically proven and radically resected after induction chemotherapy were reviewed. In the series the 5yr survival was compared according to the lymph-nodal down staging, histology, extension of resection, number of CHT cycles, pT, sex and age. The 5yr survival was than evaluated according the proliferative indexes dividing patients in two groups above and under the value of the 50th percentile for each parameter. The associations between mortality and the mentioned prognostic factors were explored by the Kaplan-Meier method, compared with the logrank test, and Cox regression analysis.

Results: The monovariate analysis confirmed the positive prognostic role in terms of 5yr survival of the lymph-nodal down staging, 31% vs 12% (p = 0.018). However also the Mi and Mib1 expression under the 50Th percentile were associated with a better 5yr survival, respectively 46% vs 5% (p = 0,007) and 40% vs 6% (p = 0,017). The Ap as well as the other prognostic factors did not show any impact on long-term survival. The multivariate analysis showed the Mi as the single independent prognostic factor (p = 0,005).

Discussion: Despite lymph-nodal down staging has been considered the principal prognostic factor after induction chemotherapy and surgical resection, the Mi and Mib1 expression in tumour residual can more accurately predict long-term survival.

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Autologous Blood Patch in Persistent Air Leaks after Pulmonary Resection

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Objective: Persistent air leaks represent one of the most common complications after pulmonary resection, leading to prolonged hospitalization and increased costs. At the present moment there is not yet consensus on their treatment.

Methods: A 8 year-experience involving 32 patients submitted to pulmonary resection that were postoperatively treated with autologous blood patch for persistent air leaks. Persistent air leaks were catalogued twice daily according to the classification previously reported by Cerfolio et al. Chest roentgenograms showed associated dead fixed pleural space deficit in 27 (86%) patients. Fifty to 150 millimetres of autologous blood was drawn from the patient and injected into the chest tube which was removed 48h after cessation of air leak.

Results: We observed a 4% incidence rate of persistent air leaks after pulmonary resection in our series. Persistent air leaks were 12% forced expiratory, 59% expiratory, 29% continuous and 0% inspiratory. The mean duration of prolonged air leaks was 10 days after surgery.

In 89% of the cases examined, blood patch was only carried out once and gave successful results within 24 hours. In the remaining 11% of cases, air leak ceased within 12 hours after the second procedure. Mean hospital stay was 14 days. In our experience this procedure had a 100% success rate.

Conclusions: Autologous blood patch is well-tolerated, safe and inexpensive. This procedure represents an effective technique for treatment of post-operative persistent air leaks even in presence of associated fixed pleural dead space deficit.

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Hyperthermic Intraoperative Chemotherapy for Pleural Mesothelioma and Locally Advanced Non Small Cell Lung Cancer

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This is a clinical study aiming to determine whether patients affected by pleural mesothelioma (PM) and locally advanced non small cell lung cancer may benefit from a multidisciplinary approach including extensive cytoreductive surgery (CRS)+intraoperative hyperthermic chemotherapy (HIOC)+/– systemic chemotherapy/radiotherapy. Pleural mesothelioma is an uncommon neoplasm, with a poor prognosis (median overall survival of 8 months in best series), the locally advanced NSCLC has a poor prognosis too (8–12 months). A variety of treatments options have been proposed, alone or in combination, but most of them have failed to demonstrate a significant impact in palliation or disease free/overall survival. The chemotherapy resistance of the tumour is well known. Thus, it seems wise to try and combine systemic therapies, though still under development, with radical surgery and locoregional therapies. Heat has a own cancericidal effect as well as a capacity to modulate chemotherapy sensibility. Recent phase I/II investigations suggested that the combined approach of an CRS+HIOC may represent a potentially effective salvage therapy for this clinical entity, long term survivors being reported. Starting from own experiences and in order to validate our preliminary results, an homogeneous group of patients with PM will underwent a multidisciplinary treatment schedule which comprises CRS, HIOC. The primary end point of the study is overall survival (OS). Secondary end points are: i) progression free survival; ii) analysis of morbimortality.

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Malignant Solitary Fibrous Tumors: Clinical Characteristics, Surgical Treatment and Long-Term Outcome in a Multi-Centric Series of 50 Patients

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Objective: Malignant solitary fibrous tumor (SFTP) represents a very rare neoplasm with an unpredictable prognosis. The aim of this study is to evaluate the surgical outcome and clinical course of this condition in a multicentric 10-yr long term experience on 50 patients.

Methods: We conducted a retrospective review of the clinical records of patients who had undergone surgical resection for malignant solitary fibrous tumors of the pleura from 01/2000 to 07/2010. Long-term 5-yrs survival (LTS) and disease-free 5-yrs survival (DFS) were calculated by the Kaplan-Meier method and compared by the log-rank test.

Results: There were 50 patients (24 men and 26 women) with a median age of 66 years (range, 44–83 years). A slight right predominance in the tumor localization was detected at clinical presentation (29 for right side and 18 for left side) while in 2 cases the neoplasm was located in the mediastinum and in 1 case it occurred bilaterally. Thirtytwo patients (64%) were symptomatic and in 3 (6%) cases an hypoglycemia correlated with the presence of SFTP (Doegg-Potter's Syndrome) was diagnosed. In 12 cases (24%) a pleural effusion (bloody fluid a part from 2 cases) was diagnosed during pre-op work-up examination or at surgery. Surgical resection included isolated mass excision in 13 patients while in the remaining 37 cases it consists in mass excision associated with lung resection and/or resection of other intrathoracic structures. A radical resection was achieved in 46 of 50 cases (92%). Tumors were polypoid (with a fibrovascular peduncle) in 11 patients (26%), sessile in 31 patients (73%) while no surgical data was obtained in the remaining 8 cases. The mean tumor diameter at surgery was 12,86 cm (range, 2–23). Operative mortality and morbidity occurred in 1 (3.6%) and 9 (8.1%) patients, respectively. Adjuvant treatment was administrated in 15 patients (radiotherapy in 11 cases, chemotherapy in 3 cases and concurrent chemo-radiotherapy in one case). Median follow-up in survivors was 116 months (range, 18–311 months). Overall 5-year (LTS) and 10-year survival for the entire cohort of patients were respectively 77.6% and 72.5% whereas 5-year (DFS) and 10-year disease free survival were 75.6% and 60.5%, respectively. Fifteen (30%) patients experienced a relapse of disease (mainly localized chest recurrences).

Complete resection yielded much better outcomes than partial resection (LTS 84,9% vs 0%, $p < 0.001$), whereas incomplete resection was associated, as one might expect, with a very poor prognosis. Among with all clinical, surgical and pathological features, Cox regression analysis confirmed the crucial role of the completeness of the resection and showed as the presence of pleural effusion ($p = 0.082$) and a ki-67 index more than 15% ($P = 0.032$) was proven to be a negative prognostic factors in terms of LTS. No other factor was found to be correlated with the prognosis.

Conclusions: Surgical resection, when technically and medically feasible, is recommended for the treatment of mSFTP even if a relapse of disease is a quite common event (about 30%). Although overall survival is satisfactory (about 77% at 5 years after surgery), unfortunately a poor prognosis may be expected in patients with pleural effusion at diagnosis and ki-67 index > 15% at pathological evaluation as weel as in those cases underwent incomplete resection or the tumor.

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Clinical Effect of Bovine Pericardial Strips on Air Leak after Stapled Pulmonary Resection in 'Frail' Patients: Early Results

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Objective: Post-operative air leaks and in particular persistent air leaks (> 5days) after pulmonary resection still represent a common complication and the first cause of hospital stay delay Aim of this experimental trial is to investigate the efficacy of the use of bovine pericardium strips (in terms of reduction of post-operative leakage and hospital stay) in 'critical' patients (COPD, emphysema etc…). underwent pulmonary resection.

Methods: From October 2010 and February 2011, 8 patients (experimental group, Group A) were pre-operative selected and underwent pulmonary resection with bovine pericardium strips (Peri-Strips Dry; Synovis®). The inclusion criteria of a 'frail patient' were established by a dedicate pneumologist according with clinical and functional data (predicted post-operative FEV1 ranging from 35% and 80% of the theorical predicted value). For comparison, from January 2010 to September 2010, we retrospectively reviewed the data of 28 patients who satisfied the same inclusion criteria and underwent pulmonary resection with standard surgical procedures. This group of patients represents our control group (Group B).

Results: There were no significant differences between the two groups in age, gender, preoperative risk factors for developing a postoperative air leak, pre-op FEV1 and type of resection. No technical deficiencies in the use of bovine pericardium strips were observed in Group A. Post-operative leakage was significant different in the two groups being persistent air leak detected in 0% in Group A versus 17,8% of Group B ($p = 0{,}046$). Consequently, chest tube duration [6.75±0.84 days (Group A) vs 9.70±1.26 days (Group B), $p = 0.019$] and hospital stay [10.13±0.83 days (Group

A) vs 12.95±1.37 days (Group B), p = 0.013] were lower in the experimental group.

Conclusions: Bovine pericardium strips are safe and easy-to-do technique to reduce post-operative air leaks after pulmonary resection in 'critical' patients.

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Post-Esophagectomy Anastomotic Leaks: The Role of the Anastomotic Location

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Objective: Esophageal anastomotic leaks are associated with significant morbidity and mortality. The purpose of this study was to retrospectively assess the role of the anastomotic site (thoracic or cervical) on the incidence of the anastomotic leak and its severity.

Methods: In the period 2002–07, we have performed extended esophagectomy with a curative-intent in 63 patients with esophageal cancer. The clinical outcome of the 46 patients where a cervical anastomosis was performed (Group A) has been compared with that of the 17 with thoracic anastomosis (Group B) in terms of leak incidence, pattern of healing, morbidity, and mortality.

Results: Leaks occurred in 11% patients of the in group A and in 8% of the group B. When the dehiscence has occurred in the cervical region 1/4th of patients died before the 30th post-operative day compared to the 3/5th of those where the leak occurred at the level of the thorax.

Conclusions: On the basis of our findings, we suggest to perform a cervical anastomosis due to lower mortality rate related to leak occurrence.

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Carotid Restenosis: Incidence and Role of Risk Factors

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Objective: We evaluated the incidence of restenosis after carotid surgery and the role of risk factors.

Materials and Methods: From January 2007 to April 2010 we recorded 233 patients, middle age 73.72+/–8.23, 170 males (73%) and 63 females (27%), with the following risk factors: diabetes 43.7%, hypertension 80.2%, smoke 63.5%, dyslipidemia 45.9%, homocysteine > 15mmol/L 53.5%, CRP > 3.5%mg/dl 35%, atrial fibrillation 5.5%, chronic renal failure 5.5%. The indications for treatment were: symptomatic stenosis in 128 patients (55%); preocclusive stenosis in 4 patients (1.71%); restenosis > 80% in 14 patients (6%), 10 restenosis of those (4.2%) previously treated in other centres; asymptomatic stenosis in 87 patients (37.3%). The restenosis occurred in 11 pts after eversion CEA (5.4%); 2 early restenosis after CAS (0.8%); 1 early restenosis of the distal anastomosis after bypass (0.4%). We performed 202 eversion CEA (86.6%), 4 CEA plus patch (1.7%), 8 CAS (3.4%),12 carotid bypass (5.1%, vein in 11 cases, PTFE in 1 cases). The treatments of restenosis were: 12 bypass, 1 CAS, 1 patch of the distal anastomosis of bypass.

Results: Median follow-up was 19 months, we recorded 15 death for not neurological events, 2 occlusion after eversion CEA (0.9%),4 restenosis > 80% (1.2%): 2 after eversion CEA (0.9%);1 early restenosis after CAS (12.5%);1 early restenosis of the distal anastomosis after bypass (8.3%). Homocysteine and CRP were 17.64±5.22 *vs* 17.88±7.16, and 4.88±4.57 *vs* 6.31±6.10 respectively in patients with and without restenosis (P = .55; OR = .53). A trial fibrillation and hypertension were associated to late death (respectively P = .007, OR = 5.78; P = .0005; OR = .16).

Conclusions: The incidence of restenosis was 2.1% in our series; early restenosis was more frequent than late restenosis; restenosis after CAS was more frequent than after CEA (P = .03); there was not a significant relationship between restenosis and risk factors.

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Endoscopic Fat Graft Myringoplasty: A Simply, Minimally Invasive and Effective Technique for the Treatment of the Tympanic Perforation

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Objectives: The aim of this study is to evaluate if endoscopic fat graft myringoplasty (MPL) technique is comparable with other MPL technique for the treatment of the tympanic membrane perforation.

Material and Methods: Endoscopic fat graft myringoplasty was performend on 43 adult patients with tympanic membrane perforation, from January 2010 to May 2011, at the Audiology and Phoniatry Department of SUN. All surgery procedures was done via endoaural access under local anesthesia. All patients underwent a preoperative auricular endoscopy and pure tone audiometry examination and was evaluated 7 days, 20 days, 50 days and 90 days after the surgery with auricolar endoscopy.

Main outcome measures: Closure of perforation;

Results: Three months after the surgery 39 patients (90,6%) showed an undamaged membrane, and only 4 patients (9,4%) presented a smaller or the same perforation found in the preoperative evaluation. A literature review shows that non-endoscopic fat graft MPL is a succesful tecnique in 88–94% of the patients treated and that retroauricolar MPL with temporalis fascia is a succesful tecnique in 88–96% of the patients treated.

Conclusion: Non-endoscopic fat graft MPL is a non-invasive procedure that avoids the retroauricular access. In literature this tecnique consents to treat only perforations that are totally visible via endoaural. Application of the Endoscopy to fat graft MPL consents to treat all perforations, also the anterior and the big ones that are often less visible with otomicroscopy.

Endoscopic fat graft MPL is less invasive of the retroauricolar MPL with temporalis fascia but has more extended indication of the Non-endoscopic fat graft MPL. For these reasons it could be considered the first choice in the treatment of perforation of the tympanic membrane.

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Sternal Replacement with Cryopreserved Allograft Sternum for Chondrosarcoma

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Objective: Primary malignant tumors of the sternum are rare, especially in the anterior mediastinum. Chondrosarcoma is the most common malignant tumor of the bony thorax. The case presented describes a new technique for replacement of the sternum, obtained by cryopereserved allograft sternum.

Methods: The authors report a clinical case of a 71-year-old female, affected by quite large mass in the anterior mediastinum associated with anterior thoracic pain. Physical and clinical examination were negative for neurologic disorders, in particular for myasthenia gravis. Such mass, placed in the retrosternal space, was presented as a thymoma, with a tight adhesion to the left posterior sternal margin. PET scan was positive only for a small focal spot between the mass and the sternal margin. We decided to treat the patient surgically.

Results: The patient underwent subtotal sternectomy and sternal transplantation with cryopreserved allograft tailored and fixed to the sternal manubrium and to the ribs by titanium plates. The surgical operation and postoperative course were uneventful. The patient underwent adjuvant radiotherapy after the operation. Ten months later, the patient is in good clinical condition, without any sign of recurrence. Pulmonary function and respiratory mechanics are regular.

Discussion: The sternal replacement with a cryopreserved allograft sternum is an innovative technique that overcomes any problem related to the prosthetic biocompatibility. Of course the innovative technique we presented is a new procedure needing validation, but is considered by the authors a good choice in cases as the one described.

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Uncommon Diagnosis of a Solitary Pulmonary Nodule: Alveolar Adenoma of The Lung

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Objective: Alveolar adenoma is an uncommon pulmonary neoplasm first described in 1986. Only 29 cases have been described in English medical literature. Usually such neoplasm has a benign behaviour and there are no recurrence reported after the surgery. The origin and histogenesis of the neoplasm are unknown. We would like to add our experience in order to growing up the knowledge on this rare neoplasm.

Methods: The authors report a clinical case of a 54-years-old non smoker woman, affected by a 18 mm, well-circumscribed, smooth edged solitary pulmonary nodule located in the left hilum, next to the left inferior pulmonary vein. The PET scan was positive. No other abnormalities were detected. Bronchoscopy and fine needle aspiration were negative for malignant disease.

Results: The patient underwent a video-assisted left thoracotomy and an incisional biopsy was performed. The intraoperative histopatological examination revealed a cystic lesion without any sign of malignancy. The lesion was inseparable to the left inferior pulmonary vein so we performed a left lower lobectomy. The surgical procedure and the postoperative course were uneventful. The final diagnosis was alveolar adenoma of the lung. One year after the operation there are no sign of recurrence.

Discussion: This is the first case reported of an alveolar adenoma with a positive PET scan. Since usually these lesions are located peripherally in the lung, our case is peculiar because of its hilar position as well. In conclusion, the authors suggest considering alveolar adenoma as possible diagnosis in cases with light PET positive pulmonary nodule.

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Endobronchial Ultrasound with Real-Time Guided Transbronchial Needle Aspiration for Diagnosis and Staging of Lung and Extrapulmonary Malignancies a Monocentric Case Study

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Background: Endobronchial ultrasound with real-time guided transbronchial needle aspiration (EBUS-TBNA) plays an important role in the minimally invasive diagnosis of pulmonary lesions and mediastinal lymphadenopathy.

Materials and Methods: From December 2005 to May 2011 we have performed 190 procedures, during which 454 biopsies were performed on a total of 239 lesions (218 lymph nodes and 21 pulmonary lesions), with an average of 2.4 biopsies for each procedure. Most frequently biopsied were the subcarenal lymph nodes (204 biopsies in total). The procedure was performed in local anesthesia and sedation.

Results: On the 190 patients that underwent the procedure, a diagnosis was reached in 164 patients (87%), 110 of which ultimately resulted positive for neoplastic disease (76 NSCLC, 19 SCLC, 3 other types of primitive lung tumors, 9 metastasis from other organ cancer, 2 lymphoproliferative disorders). 54 patients did not present malignancy (8 of which were false negatives). All the 26 cases that resulted non diagnostic later underwent surgical biopsy (mediastinoscopy, thoracoscopy). The procedure was well tolerated by most patients, with an incidence of minor complications rate of 3%.

Discussion: Endobronchial ultrasound with real-time guided transbronchial needle aspiration (EBUS-TBNA) has proved to be a very useful method in the diagnosis and staging of pulmonary and extra-pulmonary malignancy, especially considering the fact that it is a minimally invasive procedure with a relatively short learning curve, which has a low incidence of complications, is well tolerated by the patient and permits an earlier discharge from the hospital ward.

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Thoracoscopic Versus Conventional Lobectomy: Comparable Short-Term Results Associated to Lower Systemic Impact

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Background: Videotoracoscopy has emerged as an alternative to the conventional technique in thoracic surgery. We compared the outcomes after VTS and coventional lobectomies, in terms of postoperative pain, systemic inflammation and pulmonary function.

Materials and Methods: From October 2010 and May 2011, 57 patients underwent pulmonary lobectomy. Among them, 15 patients received VTS lobectomy and 42 received open lobectomy. 15 patients were selected from the 'open' group and used as controls.

Results: Operative times differed between the two groups (VTS 238.5 vs open 191.6 min, p 0.01), but we found no difference when we compared chest tube stay (POD 6.0 ± 2.83 vs 5.1 ± 2.94, NS). Perceived postoperative pain (NRS scale) was the same (POD1 3.1 vs 2.7, POD2 2.2 vs 2.2, POD3 1.5 vs 1.3, NS) and the total amount of analgesics per patient, expressed as mg of morphine/Kg, was also not statistically different (4 vs 4.8, NS). Furthermore, no statistical difference was observed in postoperative WBC and CRP between the two groups, although we believe this to be mainly due to the small population size. The average CRP was 7.6 vs. 11.6 on POD3 and 5.07 vs. 8.15 on POD5, in the VTS group and open group respectively. We didn't have any major complications, but 4 patients who had undergone VTS lobectomy had a late pleural effusion requiring thoracentesis, despite the usual postoperative management. Moreover, a patient in the same group had postoperative pneumonia: we consider it to be related to an underlying HIV-related immunosuppression, rather than to the surgical technique itself. One patient in the 'open' group experienced severe postoperative pain. One patient in each group had prolonged air-leaks and after that the 'fissureless' technique was introduced when thoracoscopic lobectomies were performed.

Discussion: We believe VTS lobectomy to be a safe technique, associated to a lower systemic impact on the patient compared to the conventional technique.

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Intraoperative Radiotherapy Associated with Oncoplastic Surgery in Early Breast Cancer: Preliminary Report of a Novel Approach in Conservative Breast Surgery

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Introduction: Oncoplastic surgery is an establish approach that combines conservative treatment for breast cancer and plastic surgery techniques. Intraoperative radiotherapy (IORT) is referred to as the delivery of a single high dose of irradiation directly to the tumor bed during surgery. We evaluated the feasibility and safety of a combined approach in patients affected by early breast cancer and breast ptosis.

Materials and Methods: We selected 5 patients that were affected by low risk early breast cancer (>45 y.o., invasive ductal carcinoma with intraductal component ociated with breast conservation surgery for breast cancer. In our opinion this technique allows a large exposure of breast gland that facilitates the prepara-

tion of glandular flaps that will be treated with IORT. In addition, the combined use of this two techniques overcomes the problem of postoperative localisation of tumoral bed, because radiotherapy is given during surgery. Contralateral adjustment can be carried out immediately or delayed. Long term follow up will be necessary to validate oncological and aestetic results.

Conclusion: Preliminary results encourage us to believe that the association between these two techniques is not only feasible but also safe and acceptable by patients for good aesthetic results. Further studies are necessary to evaluate the long-term efficacy of IORT in local control of breast cancer.

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Early Use of M-Tor Inhibitors is an Independent Risk Factor of Incisional Hernia Development after Liver Transplantation

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Introduction: Immunosuppressive therapy is implicated in incisional hernia (IH) development after liver transplantation (LT) but not as an independent risk factor in multivariate analysis. The purpose of the present study is to evaluate the risk factors of IH development after LT, focusing on immunosuppressive therapy.

Materials and Methods: We retrospectively analysed 373 patients underwent LT in our Institute. Patients were divided in two groups on the basis of the postoperative course: IH group (121 pts, 32.4%) or no IH group (252 pts, 67.6%) considering a mean follow-up of 40.4 months. We recorded and analyzed in the statistical analysis the immunosuppressive therapy administered during the first month after LT.

Results: We observed 121 (32.4%) IH after a mean time of 18.4±17.3 months (range 1.01–107 months). At univariate analysis the parameters that resulted related to the development of IH were male gender ($p = 0.029$), BMI > 29 ($p = 0.005$), era of LT after 2004 ($p = 0.023$), MELD score ≥22, HBV infection ($p = 0.017$). The highest incidence of IH was found in patients treated with PSI in monotheraphy (54.5%, $p = 0.004$). Multivariate analysis revealed male gender ($p = 0.026$, OR = 2.15 – 95% CI 1.1–4.2), pre transplant MELD score ≥22 ($p = 0.04$, OR = 2.3 – 95% CI 1.3–4.0) and use of PSI ($p = 0.001$, OR = 2.5 – 95% CI 1.5–4.2) as independent risk for IH after LT.

Conclusion: Immunosuppressive therapy with PSI is an important independent risk factor for IH development after LT and if not strictly necessary, we should avoid the use of PSI during the first month after LT to reduce the incidence of IH.

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Squamous Cell Carcinoma Arising in Pilonidalis Cyst. Radical Surgery Post Radiochemiotherapy

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Squamous cell carcinoma is an unusual complication of chronic primary or recurrent pilonidalis cyst and its malignant transformation is linked to the length of time from the onset of the sinus. This tumor has a prevalent local infiltrating behavior and rarely it gives nodal metastases (only 14%. The incidence of this condition is estimated to be 0,1% and the local recurrence rate is 50%. Usual management includes primary wide excision followed in some instances by adjuvant radiation or chemoradiation. We report a case of squamous cell carcinoma arosen in pilonidalis cyst in a 71 years old man with 50 years history of recurrent pilonidalis cyst. The lesion interested all sacral region, without evidence of node metastases. The patient came to our observation after chemoradiation treatment performed elsewhere. He presented with a deep and large ulcer involving the sacral bone. A complete restaging including CT, MRI and PET scanning did not exclude residual tumour. Patient therefore underwent surgery and an en-bloc resection of the ulcerated area with the sacrum was performed. Bilateral gluteus maximus V-Y advancement musculocutaneous flaps were used to fill the defect after resection. Postoperative course was uneventful and the patient was discharged on day 9 without pain and a recovered walking ability. Histology showed no residual tumour in the specimen. Literature reports describe surgery followed by chemoradiation as the preferred approach to squamous cell carcinomas on pylonidal cyst. This report suggest the option of preoperative chemoradiation in order to optimize the surgical results with proper extensive reconstruction techniques. A longer follow-up is needed to confirm early postoperative results.

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Failures Analysis in the Use of Trabecular Metal in Avascular Necrosis of the Femoral Head

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Objective: Osteonecrosis of the femoral head is an ischaemic disease. Surgery consists of decompression and revascularization of the head through drilling, bone graft and growth factors. A trabecular metal screw, with porosity and elasticity similar to cancellous bone, has been suggested to provide mechanical support and stimulate new bone formation.

Methods: From 2005 to 2007, 5 patients (6 hips) have been implanted tantalum screws. The etiology was: idiopathic (2), corticosteroids related (2), and chemotherapy related (1). Autologous platelet concentrate was used in all cases. In 5 cases, Steinberg stage was 1 or 2, in 1 case the stage was 3. Preoperative and 2–4years follow-up MRI and X-rays were performed. Harris hip score was used before and after surgery. Histological examination was performed for explanted screw.

Results: The necrosis was stopped in 1 patient, the other four (5 hips) showed disesase progression. Average preoperative Harris hip score was 41.01, and post-operative at 1 year was 57.3. two protrusions of the screw apex were observed due to the collapse and resorption of the necrotic bone. In 1 case, the weakening of the trochanteric region caused the rupture of the greater trochanter during prosthesis implant.

Conclusions: The screw implant described above would be ideal. Our results did not confirm this theory and this technique has shown a success rate as the other techniques. Also the metal screw was an impediment and a risk factor for hip arthroplasty. But microscopic analysis confirms the good osteoconductive capacity of tantalum.

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The Importance of Correction of Serum Levels of Homocysteine and Folate in the Prognosis of Squamous Cell Carcinoma of the Oral Cavity

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Objective: The purpose of this study was to compare serum levels of Homocysteine and Folate with Squamous Cell Carcinoma of the Oral Cavity (SCCOC), in order to find statistically significant data showing that the correction of these levels might correspond to an improvement in conventional therapies. The Study also aims to highlight the possibility that Hyperhomocysteinemia could be considered as a predictive diagnostic screening that could be added to the other markers described in the Literature.

Methods: Serum levels of Folate and Homocysteine were measured in 20 patients with histologically-proven SCCOC, before any treatment, and in 20 healty patients, non-smokers. These patients were subjected to nutritional control, with the supplementation of Folate (4 mg tablets, 1x2 for 6 months) aided by consumption of two kiwifruit a day. Checks were made at the beginning of therapy and after 1 month, 3 and six months.

Results: At the first check, cancer patiens showed consistently high values, particularly those with low-grade carcinomas. These high values, at the end of the observation period, appeared much improved. Even the healty patients revealed clear improvements.

Conclusions: The role of homocysteine and folates appears to be important in carcinogenesis of SCCOC, but these serum levels are still not a reference value, so they cannot be included among the known tumor markers.

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Maxillo-Facial Fractures; Diagnostic and Therapeutic Protocols: Our Experience

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Objective: Injuries to the facial bones, orbits and adjacent soft tissue structures are common. Maxillo-facial traumas involve the region between the cranium and the face, which includes the anterior cranial base, the naso-ethmoid-orbital region and the frontal sinuses. Correct diagnosis and treatment of these fractures is extremely important to avoid functional and aesthetical outcomes.

Methods: In this work authors present their experience in management of Maxillo-Facial trauma. A 3-year retrospective clinical and epidemiologic study evaluated the patients treated for maxillo-facial fractures at the Departments of Oral-Maxillo-Facial Surgery of the University of Rome 'Tor Vergata'. 111 patients with cranio-facial traumas were observed, from March 2008 to March 2011; 65 patients were males and the mean age was 36,4 years (range 16–68 years), 46 patients were females with mean age was 33,4 years (range 12–74 years).

Results: The treatment of these fractures is to restore normal anatomy and therefore normal function of the maxillo-facial complex. We observed 3 post-operative complications in a 4 cases (3,6%): a bifrontal access bone flap infection, a case of epiphora due to secondary obstruction of the naso-lacrimal ducts after laceration and one case of pneumocephalus.

Conclusion: It is now generally accepted that the best results are obtained with early treatment of these fractures to avoid functional and aesthetic outcomes. Surgical timing is therefore mandatory, in order to achieve a complete morpho-functional restoration of the anatomical structures.

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Cervico-Facial Reconstruction of the Face

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Objective: The authors present few cases of maxillo-facial carcinoma in which the restoration was made with traditional flaps or free-flaps according to the patient health status and her/his expectations. Reconstruction of wide defects of the superior and middle third of the face underwent progressive evolution during the last years, depending upon evolution of surgical technique.

Methods: The authors treated benign and malignant neoplasm of the cervico-facial district such as oral spinocellular carcinomas, odontogenic cysts of the jaws and orbital neoplasm. In this work, the Authors report their experience on reconstructive procedures of the superior and middle third of the face in the Department of Maxillo-Facial surgery of the University of Rome 'Tor Vergata'.

Results: The modern methodics of mio-vascular restoration of the cranio-facial district provide different rehabilitative solutions; in the common aim of the morpho-functional re-establishment, our choice was made with the need to satisfy so much the standards of a radical oncology as at same time to offer an efficacious restoration. The evolution of surgical techniques for reconstructive procedures of the superior and middle third of the face resulted in optimal functional and aesthtic outcome.

Conclusion: The objectives of surgical separative treatment employ closure of the defect, reconstruction of the surgical defect, complete functional, and best aesthetic rehabilitation.

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Maxillo-Mandibular Deformities: Our Approach

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Objective: Our aims is to correct facial malformation in one surgical time. This kind of approach is more difficult due to the more complex planning and simulation of the changes of simultaneously procedures performed. This management expose the surgical team at the risk of some planning errors that can be minimized with software analysis and experience.

Methods: In this study we present our method to approach the patients who presents a facial anomaly. The starting point to obtain a valid aesthetic structure is the formulation of a correct diagnosis and a multidisciplinary approach in order to plan a therapeutic treatment for the global solution of the problem. An accurate preoperative evaluation, integrated with a complete psychological analysis, was performed to detect objective defects and also to individualize subjective defects which in the patient's mind represents the target for the rehabilitation of the malformation.

Results: In this work we present experience in management of maxillo-mandibular malformation. In the last 3 years at the Departments of Oral-Maxillo-Facial Surgery of the University of Rome 'Tor Vergata', 22 patients with maxillo mandibular malformation were treated with simultaneous orthognathic and aesthetic complementary surgery (rhinoplasty, genioplasty, mandibuloplasty and malaroplasty); 15 third class occlusion, 3 second class occlusion and 4 open bite.

Conclusions: In our experience, after functional and aesthetic outcome analysis, and in consideration of the patients satisfaction we prefer to perform, at the same time, orthognathic surgery and aesthetic complementary surgery in order to treat in one step the malformation.

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Coupling of the Vibrant Soundbridge FMT with the Oval and Round Window: Our Experience

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Objective: We evaluate if the coupling between FMT in oval round window positioning is comparable or better than round window positioning after middle ear surgery there where only the footplate, in case of difficult access.

Methods: 9 patients undergoing vibroplasty, for a mixed or conductive hearing loss otherwise not aidable.

Group 1: 5 patients with an average air conduction (AC), calculated according to PTA (0.5–1–2–4kHz), of 80dB HL and an average bone conduction (BC) of 47dB HL with FMT positioned in oval window;

Group 2: 4 patients with an average AC of 65dB HL and VO of 30 dB HL with FMT positioned in round window.

Both groups with at 50% of perception threshold. To evaluate the functional results we underwent all patients to preoperative audiometric testing and post operative, with and without Vibrant, at first postoperative day, at 1, 3 and 6 months and after 1 year. We examinate only the last one. We also administered a self-assessment questionnaire.

Results: The free field pure tone audiometry, using Vibrant, showed an improved on average AC of 21 dB HL for the group 1 and 27 dB HL for the group 2. Also the speech audiometry results, using Vibrant, are encouraging, with a intelligibility threshold of 44 dB SPL for the group 1 and of 55 dB SPL for the group 2. Data obtained with same methods, but without the use of Vibrant, were an average of 42 dB HL for the group 1 and 48dB HL for the group 2. The results are also supported by the speech audiometry with an average of 55dB HL for the group 1 and 69 dB HL for the group 2.

Conclusion: In case of difficult access to round window, with the same surgical indications, the coupling between FMT and oval window guarantees however good functional results. All the patients, analyzing the self assessment questionnaire, received benefit with hearing aids.

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Environmental and Health Impact of Natural Gas Emanations: Effects of Hydrogen Sulphide

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Hydrogen sulphide (H_2S) is a toxic gas, always present in geothermal fluids; like carbon dioxide, it is denser than atmospheric air, and can accumulate in topographic depressions and enclosures reaching concentrations lethal to humans and animals. Volcanic and geothermal areas are one of the major natural sources.

H_2S is also present in mining, petroleum refining, paper mills, pig farms, sewage treatment plants, tanneries, sewage tanks and plants and underground structures.

H_2S has been recognized as a powerful neurotoxin at high concentrations (> 50 ppmv), but it may also induce neurological damage in humans chronically exposed to low concentrations (0.2÷1 ppmv). This work analyses the air concentrations and dispersion pattern of naturally emitted H_2S in many geothermal areas of Italy (Bagni di Tivoli, Pozzuoli, Ciampino, Agnano). Many spas are present in these areas increasing the risk of inhalation of this gas which is erroneously assumed to be beneficial.

At present, we are studying the toxic effects of H_2S on the population residing near some of the above described vents in Italy.

Air concentration of H_2S in many of these areas exceeds the recommended levels by the World Health Organization and requires the adoption of measures to mitigate this geochemical risk.

Three sites (Pomezia, Pozzuoli and Tivoli-Villalba), were studied using the method of calcocite nanothickness passive accretion on copper foil.

The results of this scientific research made it possible to develop a fast and inexpensive method for the detection of H_2S as well as create an international patent.

Finally, it was possible to provide additional guidelines aimed at mitigating this risk.

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Early Hearing Assessment after 'One Shot' CO_2 Laser Stapedotomy: Is it Helpful to Predict Inner Ear Damage and the Functional Outcome? Our Experience

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Objective: Auditory testing is not routinely performed within 4 to 6 weeks after stapedotomy because hearing acuity is thought to be transiently depressed. The early postoperative effects of the 1-shot carbon dioxide (CO2) laser have never been reported. The purpose of this study is to present data for auditory thresholds measured within 2 days of laser stapedotomy and at the last follow-up.

Methods: The study was prospective and unblinded. The study was conducted at the 'A. Gemelli' University Hospital. From January to December 2008, 58 subjects underwent '1-shot' CO2 laser stapedotomies for otosclerosis. Pure-tonal audiometric test was performed preoperatively 2 days after surgery and at least 1 month after surgery during the follow-up.

Results: The closure of air-bone gap began in the early postoperative period and continued to improve through the late postoperative period. Bone-conduction hearing thresholds were stable even in the early postoperative follow-up and remained stable trough all the course of the study.

Conclusion: Our data, supported by the literature, suggest that 1-shot CO2 laser stapedotomy is an effective and safe procedure for the treatment of otosclerosis.

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Single Incision Laparoscopic Cholecistectomy: Results after 156 Procedures

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Background: In recent years SILS cholecystectomy has been offered as the new generationofmininvasive surgery with no scars. Theoretically It is a technique that results in reduction of postoperative pain, decreasing complications and improve cosmesis. We report our experience after 156 procedures.

Materials and Method: Between october 2009 and July 2011, 156 patients underwent colecystectomy via SILS, theumbelicus was the access point to entry to the abdomen for all patients.

The patient's history and clinical assessment were verified by *ultrasonography with particular attention to the cholecysts anatomic variations.*

BMI > 30, acute clinical presentation and previous abdominal surgery weren't exclusions criteries. The study group included 54male and 99 female patients with gallstones (122 cases), cholesterol polyps (20 cases), an adenomatous polyp (7 cases), adenomyomatosis (3 case), or complex diseases (1case),

The average operative time was 46.9 ± 14.6 min. The average postoperative hospital stay was 1.8 ± 1.3 days

Results: Of 156 cholecystectomies performed with SILS,8 (5%) needed the insertion of 5 mm trocars. The conversions in conventional laparoscopic cholecystectomy were associated with cholecyst's anatomic variations previously identificated by ultrasonography. 6 were septedcholecist. Any correlation between convertion in conventional laparoscopy and BMI, previous operation, acute presentation was observed.

Any conversion in open surgery, any major complication, 1 post incisional hernia after 15 months,3 subcutaneous Hematom were observed Post-operative pain was for all the patient < 3 (scale 0–10) SILS vs VLS approach: p = 0,039.

Conclusions: For experienced laparoscopic surgeons, SILS is an easy and safe procedure. Patients benefit from milder pain, a lower incidence of port-related complications, better cosmesis, and fast recovery. The SILS procedure may become another option for the treatment of benign gallbladder diseases for selected patients.

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New Possible Antiangiogenetic Targets in Primary Breast Cancer Tissue: c-Kit Expressing Cells and Tryptase Expression

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Objective: Tryptase, a serine protease stored and released from mast cells granules has been identified as a new non-classical angiogenetic factor. Mast cells can release tryptase following c-Kit receptor activation. We have evaluated the correlations among the number of MCs positive to tryptase (MCDPT), the number of c-Kit receptor expressing cells (C-KREC) and microvascular density (MVD) in a series of 88 primary T1–3, N0–2 M0 female breast cancer by means of immunohistochemistry and image analysis methods.

Methods: Six-micrometers thick serial sections of formalin-fixed and paraffin-embedded bioptic tumor samples were microwaved at 500 W for 10 min. and treated with a 3% hydrogen peroxide solution. Sections were incubated with primary antibodies: anti-tryptase (AA1; Dako, Glostrup, Denmark), anti-c-Kit receptor (A4502; Dako, Glostrup, Denmark) and anti-CD34 (QB-END 10; Bio-Optica Milan, Italy). In serial sections MVD, MCDPT and C-KREC were counted by means of image analysis at x400.

Results: Data demonstrated a significantly (r = ranging from 0.70 to 0.92; p: ranging from 0.001 to 0.003 by Pearson's analysis respectively) correlation between MVD, MCDPT and C-KREC to each other.

Conclusion: Published *in vitro* data suggest that tryptase induce angiogenesis in vascular endothelial cells and breast cancer cells lines. According to these data we shown that MVD, MCDPT and C-KREC paralleled to each other suggesting a role in *in vivo* breast cancer angiogenesis. In this context c-Kit inhibitors and tryptase inhibitors such as gabexate mesilate or nafamostat mesilate might be evaluated in clinical trials as a new antiangiogenetic approach.

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Single Incision Laparoscopic Sigmoidectomy: Results after 156 Procedures

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Background: In recent years Single Incision Laparoscopic Approach is appeared as the future of mininvasive approach with regard to post-operative pain, decreasing complications and improving cosmesis. We report our experience in sigmoidectomy for diverticular disease.

Material and Methods: Between october 2009 and June 2011,143 patients underwent sigmoidectomy via SILS,(F/M:113:18) median age 64,7 years, the umbelicus was the access point to entry to the abdomen for all patients. Each procedure was performed by the same team of surgeons.

All the patients were referred for recurrent diverticular disease and had an experienced of a median of 6 episodes of diverticulitis before admission to surgery.

BMI > 30, acute clinical presentation and previous abdominal surgery weren't exclusions criteries.

Median BMI was 27, 4Kg/m2, most observed previous surgery: 20% appendicectomy

12% cholecystectomy, 30% hysterectomies, 6% Inguinal Hernia

Surgical technique was similar to our conventional laparoscopic approach from lateral to medial, standard straight instruments.

The preparation continues:

- until left colic flexure that is partially mobilized and separation of splenocolic ligament.
- in the pelvis, the peritoneum and meso were divided in the recto-sigmoid area (Endo Gia 60–3.5 articulating instrument.
- Division of the mesentery and complete mobilization of sigmoid.

– Distal end grasp with a sharp forcep at which point was automatically in the wound.

In order to assess differences in post operative pain the group of sils was compared with a control group of paient underwent conventional laparoscopic sigmoidectomy. Statistically analysis was performed with spss software

Results: Of 143 sigmoidectomy performed with SILS,135 were successfully completed.

8 needed the insertion of 5 mm trocars for introduction of a Robinson drenage. 3 conversions in open surgery for the precence of abscess underestimated with imaging. Median operation time was (range) 130 min (65–155min). About major complications an anastomotik leakage, among minor complications 2 subcutaneous hematoma were observed. For what concern post-operative pain Sils group showed decrease post-operative pain SILS vs VLS $p < 0,0034$ and no need of post-operative pain pump.

Conclusions: Sils Sigmoid resectionis a feasible procedure for all patient requiring conventional laparoscopic approach. It can be performed safely without increase in complication rate, time of surgery, lenght of hospital stayand advantages in terms of any visible scar and above all post-operative pain

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Multivisceral Resections Forcolorectal Cancer: Isocclusive Presentation an Independent Prognostic Factor?

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Background: Practise guidelines recommended en bloc multivisceral resection (MRV) for all involved organs in patients with locally advanced adherent colorectal cancer (LAACRC) toriducelo calricurrence and improved survival. Any clear management is indicated for LAARC in occlusive syndrome at first presentation. Aim of this study was theimpact of occlusive syndrome in LAACRC n terms of survival and the eventual role like a prognostic factor.

Material and Methods: 43 patients underwent abdominal RMV for cancer with curative purpose; about theese 22 for LAACRC Among theese A groupof 6 patients with occlusive was compared with a second one of 16 patients with uncomplicated presentation. I. For every patient tumor, clinical characteristics, surgical technique, hospitalization's time, hystologic exams were analized.

Three years was the follow-up with check every 6 months. P Statistical analysis was performed with a commerciable available software package (SPSS for windows).

Continuoud and discrete variables were assessed with oneway analysis of variance and Test T student. $P < .05$ was considered statistically significant.

Results: Decrease of survival in patients underwent surgery for LAARC ($p = 0,033$) was observed, postoperative complications rate was higher for patients with uncomplicated presentation. ($p = 0,004$) Higher CA19.9 values were associate to RMV with complicated presentation ($p = 0,004$) and connected with law survival ($p = 0,024$).

Conclusions: Occlusive presentationis a negative prognostic factor for the execution of RMV for LAARC, Higher level of CA 19.9 are connected with survival decrease at 3 years followup. Further research and randomized trial sare requeared to validate these findings.

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Low Cost Technique of Laparoscopic Appendectomy for Complicated Acute Appendicitis

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Cost-effectiveness of laparoscopic appendectomy is the greatest matter of debate in choosing open or laparoscopic approach. Expensive laparoscopic devices are often used for complicated/perforated appendicitis for safety reasons, thus limiting use of laparoscopy in such cases.

52 consecutive patients have been treated laparoscopically for acute/complicated appendicitis by a single surgeon, between June 2010 and September 2011. Findings other than acute appendicitis have been excluded. Clinical, intraoperative, postoperative, follow up data and costs have been recorded and compared to control group of 49 open appendectomies performed by the same operator within the same period. Laparoscopic technique includes one disposable 10–12mm umbilical blunt port, two re-usable 5mm ports. Gasless mini-open technique is used for intraperitoneal access. Inflamed appendix is carefully isolated by atraumatic graspers and/or laparoscopic suction cannula. Mesentery is bluntly divided using Maryland dissecting forceps or scissors with monopolar/bipolar diathermy. Appendix is divided between Endoloops. Specimen is retrieved within a thumb finger of latex glove and extracted through umbilical port. Suction and irrigation are generously used. Tubular or corrugated drains are used when necessary.

Mean age of Lap-group was 32.7 years, M/F ratio 1/3, average Alvarado and AIR score 8.9 and 8.1 respectively.

Mean operative time was 51.65 min (range 29–75), conversion rate 0%, mean lavage 1800 cc. 82% were complicated appendicitis (defined as gangrenous/perforated/purulent appendicitis); mean LOS 48.6 hours, average VAS at POD 1/2/7/14 respectively 2.9/1.3/0.85/0.61, time for return to work 7.28 days (range 3–28), return to daily physical activity 2.4 days (1–5), morbidity 5% (IAA 1/38, treated with US-guided percutaneous-drainage, SSI 1/38).

Average operative costs were 201€ (range 104€–385€), LOS 1692 (1161€–2838€)

A low cost technique without affecting safety and outcomes, is feasible and may decrease costs, allowing wider use of laparoscopy.

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Successful Gastric Laparoscopic Removal of a 4 cm Drug Packet from a Smuggling Body Packer

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A 24 years young man landed from Nigeria, was arrested at Bologna Airport for suspected narcotics traffic and body packing and referred to Maggiore Hospital Emergency Medicine ward for observation. After 6 days of medical conservative management and offloading 5 drug packs, a last sixth pack was still retained into the gastric cavity, as showed by CT scan. The patient underwent a laparoscopic procedure with a longitudinal anterior gastrotomy, careful extraction of an intact 4 cm long pack, its exteriorization from the gastric cavity with a 'no touch' technique, retrieval protected within an endo-bag, laparoscopic closure of the gastrotomy with endo-stapler and Oversewing of the suture line by intracorporeal suture with 3/0 Vicryl in a running fashion with intracorporeal knots.

Internal concealment is a widespread method of illegally transporting cocaine and other narcotics across borders. People who engage in this practice are commonly known as body packers or mules. Stable patients are candidates for conservative treatment and admitted to a monitored setting for close observation and haemodynamic monitoring. Progression of the drug packets is periodically monitored with serial abdominal x-rays. Patients who exhibit signs and symptoms of intoxication, obstruction or haemodynamic instability need aggressive resuscitation and immediate laparotomy. Suspecting cocaine intoxication or damaged packets requires as well immediate laparotomy to remove all the packets. The indications for surgery in these patients are: Onset of Drug-induced toxic effects with persisting signs or symptoms of cocaine intoxication, evidence of bowel obstruction, intestinal retention after 5–7 days of conservative management.

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Laryngeal Carcinoma in Female and it's Correlation with Genital and/or Mammary Pathologies

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Laryngeal carcinoma in female is an infrequent malignant tumour; in literature it's incidence, around 5% vs male, over the last years, increase in both sex without significant difference in ratio. The risk factors are: tobacco, alcohol and exposition to many carcinogenetic agents (atmospheric pollutions, wood and metal dusts, mustardgas, hair dyes, asbestos, nickel and other factors). In literature is reported the possible influence of hormonal factors to explain the great difference in incidence between male and female. For these considerations we interested to review our series of female patients with laryngeal carcinoma account of the eventual occurrence of previous and/or concomitant genital and/or mammarypathologies. A personal series of 77 laryngeal carcinoma in women from January1981 to December 2010 is considered, with incidence female vs male (1581 cases) of 4,87%. In these female patients are considered: the age of onset of the tumour, the use of tobacco and/or alcoholics, the primary site of origin, the TNM, the clinical stage (S), the histopathological findings, the work and the correlation with (previous and/or actual) genital and/or mammary pathologies, the surgical treatment and the follow-up. Our data, comparing with those of the literature and the incidence of endocrine system diseases, are evaluated. To conclude: the tobacco is a fundamental factor of risk in the pathogenesis of laryngeal carcinoma, nevertheless unknown hormonallack of balance could be a favouring factor for the occurrence of genital and/or mammary pathologies and laryngeal cancer in woman.

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Monitored Anesthesia Care with Target Controlled Infusion (TCI) in Myringoplasty

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Objectives: The aim of this study was to evaluate the efficacy of the Monitored Anaesthesia Care with Target Controlled Infusion (TCI) associated to local anaesthesia in retroauricular myringoplasty, as an alternative to general anaesthesia. Design: The study group consisted of 55 patients submitted to myringoplasty aged 8–80. In 91% a simple myringoplasty was carried out, while in 9% an ossiculoplasty was associated to myringoplasty. Surgery was carried out in general anesthesia and following the MAC with TCI. Each patient underwent a routine preoperative and postoperative evaluation. Results: The outcome of the intra-

operative parameters monitoring during surgery is different in the two groups. Subjects belonging to general anaesthesia presented a significantly lower AP and AAI level while subjects belonging to MAC with TCI had a lower ET CO2. Sp O2 and HB did not differ between the two groups. Patients and surgeon comfort was the same in the two groups. As regards result of myringoplasty the healing of the tympanic perforation at the last control was gained 84% while 16% presented a drum re-perforation. In both groups the frequency of tympanic re-perforation was the same. Mean post-operative air conduction threshold was 32 dB and air-bone gap improvement was 13 dB. Conclusions: We can conclude that the MAC with TCI applied in myringoplasty does not involve the risks or side effects that can be provoked by narcosis and for this reason it can be recommended to patients with ASA > 2.MAC with TCI can be considered as a first choice because of the excellent comfort for the patient as well as for the surgeon, reaching the same anatomical and functional results achieved under general anaesthesia.

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Spasmodic Dysphonia: Diagnosis and Therapy

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Summary: Spasmodyc dysphonia (SD) is a cronic and often disabling voice disorder of unknown pathogenesis. Abductor spasmodic dysphonia (ABSD) and Adductor spasmodic dysphonia (ADSD) are the two main types of SD. ADSD is more common (82%).

The aim of this study was to demonstrate the utility of botulinum toxin type A injections for reduction of abnormal motion of laryngeal muscles during speech.

Methods: Ten patients with ADSD were identified, between May 2010 and June 2011, and treated with BTX type A injections into the thyroarytenoid muscles using electromyographic guidance.

Videolaryngoscopy, Aerodinamic, Acoustic analyses were performed prior to one month after treatment.

Results: Voice efficiency improved after botulinum toxin injection. Significant difference was found in aerodynamic and acoustic analyses between before and after treatment. The median duration of benefit was 16 weeks.

Nine patients with ADSD were pleased with the injection results and requested that the injection be continued as part of their routine treatment.

Conclusions: TA muscle Botox injections to the treatment of patients with ADSD improve voice outcomes and quality of life. These cases support the use of chemical neuromuscular blockade for treatment of ADSD.

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Petrous Bone Cholesteatoma: Classification, Management and Review of Literature

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Objective: To discuss the classification of Petrous bone cholesteatoma and add a sub-classification; to review the existing literature and to propose the ideal surgical management of Petrous bone cholesteatoma (PBC) based upon the experience of the largest series published in the literature until now.

Study Design: Retrospective analysis.

Setting: Quaternary referral neurootologic private practice.

Materials and Methods: A retrospective case study of 129 patients who underwent surgery for petrous bone cholesteatoma between 1979 and 2008 were analysed for the classification, type of the approach used, facial nerve lesions and its management, recurrences and outcome.

Results: Out of 129 cases there were 64 Supralabyrinthine, 9 Infralabyrinthine, 7, Infralabyrinthine apical, 48 Massive and 1 Apical class of PBC. Facial nerve was involved in 95% of the cases. Hearing could not be preserved in 82% of the cases due to the extent of the lesions and the surgical approaches used. Internal carotid artery, jugular bulb and the lower cranial nerves were infrequently involved, but demanded careful identification and meticulous care to avoid complications. Obliteration of the cavities provided a safe solution for protection of the exposed dura and the vital neurovascular structures. Recurrences were observed in 5 cases.

Conclusion: Classification of PBC is fundamental to choose the right surgical approach; facial nerve is involved in almost all the cases, radical removal takes the priority over hearing preservation and obliteration of the cavity is important to protect the vital neurovascular structures which may be exposed.

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Tapp Groin Hernia Repair with Progrip™ and V-loc™ 180. The Fastest Way and Without Pain

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Introduction: Laparoscopic groin hernia repair using the transabdominal preperitoneal (TAPP) technique allows good results concerning post-operative pain and consequently faster full physical recovery to be obtained, when compared to open tension-free repairs. Some argue in favour of open repair because TAPP has increased costs due to trocars and fixation devices. We

report our initial experience with self-gripping lightweight mesh (Parietex ProGrip™- Covidien) that does not require fixation devices or glue and, moreover peritoneal closure utilizing the Covidien™ V-Loc™ 180 device.

Materials and Methods: In the period January – December 2010, 31 male patients affected by both direct and indirect groin hernia were operated with a TAPP repair. 19 pts presented a bilateral hernia, 5 pts out of 30 were affected by a recurrence and in 7 cases the repair was primary. The mesh implanted was the Parietex ProGrip™ mesh. No fixation devices or glues were used. We recorded operating time, post-operative pain and full recovery of physical activity.

Results: Mean operating time was 45 minutes for each hernia (average 30–60 min). Antalgic post-operative therapy consisted of 2 administrations of 30 mg i.v. of Ketorolac every 8 hours. Discharge of the patients was always after 24 hours in a one-day surgery regimen. We recorded 3 complications in the bilateral group: 2 monolateral seroma and 1 scrotal haematoma solved spontaneously.

Conclusions: The use of ProGrip™ mesh allows us to successfully conclude the TAPP procedure in a shorter operating time. Fixation devices or the application of glue is not necessary so the costs, post-operative and chronic pain are reduced. The light weight of the mesh is another factor that helps optimal patient comfort to be achieved. The closure of peritoneal wound is faster and easy and without additional costs with V-Loc™ 180.

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Neuroendocrine Tumor of the Small Bowel: An Unusual Presentation and Literature Review

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Introduction: Primary malignant tumours of the small bowel are very rare accounting for 1–1.4% of all gastrointestinal neoplasms and determining 1% of gastrointestinal tumour-related deaths. Neuroendocrine tumours constitute 55% of all gut endocrine tumours and 12–35% of all small bowel tumours, and there is an increased family risk for the disease.

Case Report: A 60-years-old man was admitted to our emergency department of surgery due to acute abdomen with a recent history of vomiting, abdominal pain, abdominal distension and bowel obstruction. Thirty years before the patient had a left nefrectomy due to litiasis; no significant medical or familiar history of gastrointestinal disease was referred. Physical examination revealed abdominal distension, diffuse tenderness and guarding. Blood tests showed leucocytosis and elevated CRP. A CT-Scan showed signs of bowel obstruction and intestinal ischemia related to a volvulus involving the small bowel with intra-abdominal free fluid. Emergency surgery was performed and a small bowel obstruction due to a volvulus arising from an ileal stenosing mass and developed through an internal hernia placed in the site of the previous nefrectomy was revealed. The patient underwent a resection of the ileal volvulus including the tumour and a manual side-to-side anastomosis was performed. The histological report demonstrated a well differentiated neuroendocrine tumour of the small bowel. Immuno histochemistry revealed a positive reaction for NSE, somatostatin, cromogranin, CD-56 and a Ki-67 < 5%. The postoperative serum cromogranine A was in the normal range. Postoperative recovery was uneventful and the patient was discharged twelve days after the operation. The follow-up is disease-free after two years.

Conclusions: This case report highlights that neuroendocrine tumours could be considered in an unusual way in the differential diagnosis of small bowel obstruction secondary to a volvulus.

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Surgical Treatment of Inverted Papilloma: Our Experience

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Objective: Inverted papilloma is a benign tumor of nose and paranasal cavities with multifocality, local aggressiveness, high tendency to recurr and potential cancerization. The objective of our study is to compare the results of endoscopic surgery compared to open traditional surgery.

Methods: From 2000 to 2010, 88 patients affected by inverted papilloma were treated, 67 were approached with endoscopic surgery and 21 with external procedures. All patients underwent follow-up with flexible and rigid endoscopy every 3 months during the first year and every 4–6 months during the following years, together with CT and MRI every 6 months.

Results: The group included 57 males and 31 females, mean age 52 years. The 28.6% (6/21) patients who underwent open surgery, presented recurrence after 12–74 months (mean fup 42), the 14.92% (10/67) patients who underwent endoscopic surgery presented recurrence after 18–72 months (mean 45). The hospitalization time was 8 days in case of external procedures, while 3–4 days for patients treated endoscopically.

Conclusions: Endoscopic surgery seems to be more effective than open surgery either for the local control of the disease, (lower recurrence rate), or for the conditions of patients during the post-operative period (shorter hospitalization, less post-surgical complications and pain, no scars). It is possible to say that endoscopy is an excellent alternative to traditional surgery, in most cases of inverted papilloma and it's the gold standard procedure in the treatment of the IP.

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Orbitaria Cellulitis Treatment in Paediatric Patients: Transethmoidal Approach

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The orbitaria cellulitis is a septic process localized to the posteriorly situated soft tissues to the orbital septum and constitutes the most frequent cause than monolateral exophthalmos in pediatric age. Approximately the 90% of the cases of orbital cellulitis in pediatric age are associated to ethmoid, of which they represent more frequent the ophthalmological septic complication. It has been carried out a past study on the patients affections from orbital cellulitis from the 01.01.2001 at the Hospital of Salerno.

They have been included in the study 18 young patients untill to 18 years, sicks of orbital cellulitis in stage II, III, IV according to Chandler; four patients have been dealt with medical therapy and 14 patients have been subordinates to surgical operation.

In all the dealt patients have been obtained the complete resolution of the inflammatory process. The surgical treatment of choice, has been carried out in the cases that did not show improvement in successive the 48–72 hours, it is an approach of ethmoid type through-orbital, moreover less invasive regarding the classic orbitotomy. In the children it is often opportune to associate an adenoidectomy, in order to eliminate eventual infections deriving from interest of the lynfatic tissue of the organ.

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Induction Chemo-Radiation followed by Surgical Resection for Pancoast Tumor: Long-Term Results in a Single Institution

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Background: Pancoast tumor is a neoplasia in which the optimal therapeutic management is still controversial. Recently a multimodality approach with induction chemo-radiotherapy (CT-RT) and surgical resection yielded interesting results. The aim of the this study was to determine whether a trimodality therapeutic scheme improves local control and survival.

Methods: Patients in stage IIB to IIIB were enrolled in the study between 1994 and 2009. Induction therapy consisted of a platinum-based CT. RT was administered 5 days/week. After restaging, eligible patients underwent surgery 3–4 weeks post-radiation.

Results: Fifty patients (male/female ratio: 44/6, median age: 63 yrs) completed the protocol. 17(34%) received MVC chemotherapy scheme and 33 (66%) NC. 8 (16%) patients received 30 Gy of RT and 42 (84%) 44 Gy. 44 (88%) patients underwent R0 resection and 7 (14%) had a complete pathologic response (CPR). 30 (60%) cases were T3 and 20 (40%) T4, 43 (86%) were N0 and 7 (14%) N+. Thirty-days mortality rate was 6%, perioperative non fatal complications occurred in 26%. At the end of follow-up (02/2011) 18 (36%) patients were alive and 32 (64%) died (25 for cancer-related causes; 84% distant metastases), with an overall, 5-year survival of 38%. At univariate analysis stage IIB ($p = 0.02$), R0 resection ($p = 0.02$), T3 tumor ($p = 0.009$) and CPR ($p = 0.01$) were significant predictor of better prognosis.

Conclusions: This combined approach is feasible and allows for a good rate of complete resection. Long term survival rates are acceptable, especially for T3 tumors. Systemic control of the disease still remains poor with distant recurrence being the most common cause of death.

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Can Rotator Cuff Repair Change the Evolution of Muscle Atrophy and Fatty Infiltration? A Case Control Study

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Rotator cuff tears are closely related with muscle atrophy and fatty infiltration and both affect healing and clinical outcomes after surgical treatment. Despite the importance of those degenerative changes, no case control study has been conducted to assess the effect of surgical treatment on muscle atrophy and fatty infiltration. The aim of this ongoing study was to compare surgical treatment and conservative management of complete, reparable rotator cuff tears. Thirty-six patients with clinical and radiological (MRI) diagnosis of complete rotator cuff tears were retrospectively identified (Group A, 18 patients: surgical treatment; Group B, 18 patients: conservative treatment). At follow-up (T1) all patients underwent a new clinical (Vas, Simple Shoulder Test, Constant Score) and radiological (MRI) evaluation. The average follow up was 50 (group A) and 61 months (group B). By comparing the two groups at T1, we registered a statistically significant difference in the SST ($p < 0.05$) in the Vas score ($p < 0.01$) and in the Constant Scale ($p < 0.05$), with better results in Group A. The evaluation of fatty infiltration and muscle atrophy showed no statistical evolution in Group A, while in group B a statistical significant worsening was detected ($p < 0{,}001$). Out of group B, we also detected a statistical significant increase of tendon retraction ($p < 0{,}05$), an increased number of tendon involved ($p < 0{,}05$), and a worsening of tear size ($p < 0.001$). Group B showed an evolution in eccentric arthropathy ($p < 0.012$), while in group A remains unchanged. Surgical treatment of complete rotator cuff tears decrease the irreversible changes that involve muscle belly. Rotator cuff tears have a characteristic evolution which can leads, with time, to an eccentric arthropaty. This affect healing and clinical outcomes. Surgery could intercept those degenerative phenomena and allow to an improve supraspinatus muscle trophism. Surgical treatment should be considered before those degenerative changes significantly evolve.

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IPOM for Inguinal Hernioplasty with Biological Glue Microlaparoscopic Personal Variant

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Objective: The IPOM (Intra Peritoneal Onlay Mesh) for inguinal hernioplasty, with biological glue fixation of the mesh, is an interesting alternative to the TAPP and the TEPP, indicated for small hernias mainly during bilateral hernia repair. We present our microlaparoscopic variant.

Methods: The basic steps of the surgical technique are: pneumoperitoneum induction with Verres in periumbelical site; disposition of one 5 mm trocar for 30 degree optic and two 5 or less mm trocars in right and left lower abdominal quadrant; possible reduction of the hernia sac and lipoma; preparation of the mesh implant site; personal technique for insertion into the abdomen of the mesh through endobag; accurate dilution of fibrin glue; uniform spreading on the mesh; ready adherence of the mesh to the peritoneum.

Results: 73 microlaparoscopic IPOM for inguinal hernioplasty with biological glue fixation of the mesh have been performed from 2006 to 2011. 32 hernias were direct, 41 were indirect. Average operative time: 11 minutes. Hospital stay: one day. Faster return to usual activities with good patient satisfaction. Average follow up time was 24 months with patient check at one week, 1–3–6 months and 1–2–3 years. No complications were reported: no recurrence, nor postoperative pain syndromes, through the use of fibrin sealant, nor seroma.

Conclusions: No local pain, complications and recurrences, resulting in better patient satisfaction. More cases with longer follow-up will be useful to expand the indications of this microinvasive technique.

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Microlaparoscopic TAPP

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Objective: We propose a new microinvasive technique for the Transabdominal Preperitoneal Hernioplasty (TAPP), with microlaparoscopy and with biological glue fixation of the mesh.

Methods: The basic steps of the surgical technique are: pneumoperitoneum induction with Verres in periumbelical site; disposition of one 5 mm trocar for 30 degree optic and two 5 or less mm trocars in right and left lower abdominal quadrant; incision of the peritoneum; dissection of the hernia sac, with removal of any plug migrated; parietalization of the spermatic cord; insertion into the abdomen of the mesh in endobag with personal technique; mesh placement fixed with biological glue; closure of the peritoneal incision with a continuous suture of monofilament or self-locking suture.

Results: 251 Transabdominal Preperitoneal Hernioplasty (TAPP) with microlaparoscopy and with biological glue fixation of the mesh have been performed from 2003 to 2011. The technique was applied to the following selected cases: hernia recurrence, bilateral hernia with or without recurrence, hernioplasty during other laparoscopic interventions and requested by patients performing sports activities; always been performed under general anesthesia. Hospital stay: one day surgery Recurrence rate: 1,6%. No major complications nor postoperative pain syndromes through the use of fibrin sealant: post-operative seromas in 2.3% of cases resolved completely in three months in 99% of cases; return to usual activities is faster with good patient satisfaction.

Conclusions: The microinvasivity in Transabdominal Preperitoneal Hernioplasty decreases postoperative pain, trocar-site hernias and bleeding, without compromising the results. The result is an improvement in patient satisfaction.

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Personal Technique with Two Trocars in Ventral Hernias Repair

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Objective: Eighteen years after the first series of 5 laparoscopic incisional hernias repair, this technique is standardized. We want to introduce a new microinvasive technique: "two-trocar technique with the use of biological glue", to further reduce the traumatism.

Methods: The basic steps of the surgical technique are: pneumoperitoneum induction with Verres; disposition of 2 trocars, one 10 mm optic for mesh introduction and one 5 mm in the left anterior axillary line; 5 mm 30 degree optic; transparietal placement markers to sign an overlap > 4 cm; measurement of "teilored mesh"; mixed fixing reducing traumatism (biological glue and half of the usual of titanium or reabsorbable spirals). Patients with significant peritoneal adhesions are excluded from this technique.

Results: 51 operations have been performed from 2007 to 2011: middle lesion size 4 cm (2–6 cm), 12 pt. (34,2%) with BMI > 30, 24 female and 27 male, middle age of 60,5 years old (35 and 89). 25 incisional hernias (8 recurrent and 4 complex defect treated with double mesh), 16 umbilical, 9 epigastric and 1 Spigelian. Middle operative time: 45 minutes (25–85 min). No postoperative complications. Reduction in postoperative analgesic assumption of 57%. Middle hospital stay 30 hours. Relapse rate (F.U. > 24 months): 0%.

Conclusions: Less Pro Tack, less port. This means less pain and less complication without affecting the results. We consider this technique effective and safe and another step towards the micro invasiveness, with great advantage for the patients.

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Technical Improvement: Mesh Fixation with Fibrin Sealant (Tisseal®) in Laparoscopic Ventral Hernia Repair

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Objective: We present a preliminary experience of a new technique of mesh fixation with fibrin sealant in laparoscopic ventral hernia repair. Performed after the good results of experimental studies in ventral hernia repair and of case studies of inguinal hernioplasty (IPOM) with fibrin glue.

Methods: The innovation of this surgical technique is the fixation of a tailored mesh (according with an overlap > 4 cm) using diluited fibrin sealant (Tissucol®). Tissucol is nebulized on a Parietex™ Composite mesh with a spray set. No Pro Tack and no transfascial sutures. Ten minutes without pneumoperitoneum are required to control the perfect adhesion of the mesh. If this does not occur we use pro tack. Patients with hernia size > 2 cm are excluded from this technique.

Results: We performed 11 operations: middle hernia size 1,8 cm (1,5–2 cm), 4 female and 7 male, average age of 60,5 years old (40 and 89). 2 incisional hernias, 5 umbilical, 4 epigastric. Average operative time: 30 minutes (20–40 min). No postoperative complications. Reduction in postoperative analgesic assumption of 90%. Average hospital stay 30 hours. Relapse rate (F.U).

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Ileostomy Takedown in Patients with Ileal Pouch for Ulcerative Colitis: Stepwise Clinical Approach Versus Routine Pouchography

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Objective: Restorative proctocolectomy is often performed fashioning a temporary diverting loop-ileostomy usually closed after 2–3 months after physical evaluation, pouchoscopy and pouchography. Our aim was to assess the role of pouchography before ileostomy closure in patients with negative clinical esamination.

Methods: We retrospectively reviewed a database of patients undergoing ileostomy takedown in our Unit between 1987 and 2009. One hundred eighty-three patients were identified who underwent restorative proctocolectomy with S-, W- or J-pouch for ulcerative colitis. The standard operation consisted of a two-stage procedure; in emergency setting a three-stage procedure was performed. J-pouch, symptom-free patients with normal clinical examination undergoing first-step surgery in elective settings were considered suitable for evaluation. Data regarding 70 patients were reviewed in this study. Patients were classified as Group A (37 patients) if they underwent pouchography before ileostomy closure or Group B (33 patients) if they did not.

Results: Takedown was significantly delayed in patients undergoing pouchography ($p = 0.03$). Patients experienced similar early functional impairments. Failure occurred in one Group B patient, and in one patient of the pouchography group with an anastomotic sinus despite radiological healing was achieved before takedown.

Conclusions: Pouchography can be safely omitted before ileostomy takedown in symptom-free patients, if clinical and endoscopic follow-up is carefully performed. All detected anomalies were already suspected clinically.

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Spigelian Hernia: A Rare Case of Bilateral Hernia and Presentation of Our Experience

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Background: Spigelian hernia occurs through slit-like defect in the anterior abdominal wall adjacent to the semilunar line. The hernia ring is a well-defined defect in the transverses aponeurosis and it constitutes only 0.12% of abdominal wall hernias. Considering the rarity of this kind of hernia, we thought to review our experience in management of the disease.

Methods: In the last thirty years of surgical activity nine cases of spigelian hernia have been diagnosed and treated surgically. This group included three men (33,3%) and six women (66,7%) with a mean age of 63 years old. Risk factors were characterized by previous abdominal surgery, COPD, multiple pregnancies. In six patients spigelian hernia was located in the left side, in two patients in the right side and in one case was a bilateral hernia associated with an incidental hepatic haemangioma. In all patients clinical diagnosis was preoperative, radiological investigations were performed in order to confirm clinical suspicion.

Results: All patients have been treated surgically using direct reconstruction. In eight patients (88,8%) we performed an open approach with four hernioplasties with a polypropylene mesh placed underneath external oblique aponeurosis and four direct herniorraphies, and three patients have been treated in emergency for intestinal occlusion. In bilateral Spigelian hernia (11,2%) we performed a laparoscopic approach placing a bilaminar mesh in intraperitoneal position.

Conclusions: In our experience open approach has been easy to perform with good results.

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Transient Elastography (Fibroscan®) may Improve the Assessment of Liver Fibrosis and Portal Hypertension in Patients with Cirrhosis and Hepatocellular Carcinoma

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Objective: Portal hypertension has been reported as a negative prognostic factor and a relative contraindication to liver resection. The aim of this study is to evaluate a possible correlation between grading of fibrosis by transient elastography (Fibroscan®) and portal hypertension in patients with cirrhosis and hepatocellular carcinoma.

Methods: In this study 77 patients with cirrhosis, 42 of whom with HCC, were enrolled between 2009–2010. The group comprised 46 males and 31 females with a mean age of 65.2 years. The main etiology was HCV-related cirrhosis (66.2%). Liver function was assessed according to the Child-Pugh classification. In all patients liver stiffness measurement (LSM) was performed using Fibroscan®. The presence of portal hypertension was indirectly defined as 1) esophageal varices detectable at endoscopy or 2) splenomegaly (increased diameter of the spleen ≥12 cm) with a platelet count of.

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Hepatic Resection for Hepatocellular Carcinoma on Cirrhosis: Prognostic Significance of Portal Hypertension

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Introduction: The role of portal hypertension in hepatic resection for HCC is still uncertain. The aims of this study were to report the outcomes of hepatic resection in patients with or without portal hypertension in a group of patients with HCC on cirrhosis and to clarify the relationship between portal hypertension, extent of hepatectomy and long term survival.

Methods: We analyzed data from 135 patients who underwent resection for HCC between 1990 and 2008. All the patients were classified according to Child-Pugh classification and the presence of portal hypertension was defined as the presence of esophageal varices or splenomegaly associated with platelet count of resection and portal hypertension showed that patients submitted to wedge or segmentectomy and portal hypertension had similar survival compared to patients without portal hypertension, with a median survival time of 60,5 months and 64,9 p. Child-Pugh A patients submitted to wedge or segmentectomy can have good long term results also in presence of portal hypertension.

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Right Hemicolectomy under Epidural Anesthesia: A Review of Our Experience on a Consecutive Series of 35 Patients

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Introduction: Fast track surgery is a new approach to perioperative care that reduce the physiological surgical stress improving outcomes and decreasing lenght of stay. Epidural anesthesia is an important component of this approach. Aim of this study is to present our experience.

Methods: During the period july 2007 through December 2010, 50 patients underwent right hemicolectomy at our institution. 35 of these (70%) were operated on under epidural anethesia as part of a fast rack surgery protocol. This also included the insertion of n epidural catheter for post-opertive analgesia, avoidance of the NG- tube, earlu feeding starting from day one, early removal of the urinary catheter and early mobilization. The remaining 15 (30%) were given a general anesthesia. We have reviewed retrospectively the patient demographics and co-morbidities, operative details, post-operative recovery and lenght of hospital stay.

Results: Median operative time was 147 min (range 75–395 min) in the epidural anesthesia group vs 122,97 min (range 70–230 min) in the general anesthesia group. The epidural anesthesia group was characterized by a shorter lenght of hospital stay (8,5 vs 11 days) and shorter time to first bowel movement (3,2 vs 5,27 days). Complications occurred in 9 patients (27,5%) in the epidural anesthesia group as compared with 6 patients (40%) in the general anesthesia group.

Conclusion: Right hemicolectomy under epidural anesthesia as part of a fast track surgery protocol appears to offer a valid alternative to the conventional general anesthesia and compares favourably to the results obtained by s laparoscopic procedure, with the added advantage of lower operating times, lower costs and a shorter curve for surgeons in training.

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Clinical Features and Surgical Management of Patients with Gastrointestinal Stromal Tumor of the Stomach

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Objectives: Gastrointestinal stromal tumors (GISTs) have an annual incidence of approximately 8000–9000 cases in Europe and 4000–5000 cases in the USA even if several autoptic studies registered higher incidences. The median age of onset is approximately 60 years without a clear gender predilection. The 60% of GISTs are located in the stomach. The aim of this study is to describe

the clinical characteristics and to define the appropriate surgical management of gastric GISTs.

Methods: We retrospectively reviewed the clinical records of 9 consecutive patients with gastric GIST treated in our institution in order to evaluate demographic profile, symptoms at presentation, imaging and endoscopic methods employed, surgical treatment, histology and survival.

Results: The mean age of the patients was 63 years old and the male female – ratio was 4:5. The most frequent symptoms at presentation was: melena, hematemesis ed abdominal pain. Ultrasound, CT scan and EGDS were the methods most employed for diagnosis and surgical planning. All patients underwent surgical resection of the lesion with at least 2cm of health tissue at the margins. The lesions were capsulated in all cases. Survival was 87.5% with a mean follow up of 48.6 (2 – 88) months.

Conclusions: The most frequent symptoms related to gastric GISTs are melena, hematemesis and abdominal pain and EGDS is the best approach to obtain diagnosis. CT scan is the best imaging technique for surgical planning. Resection of the lesions with appropriate margins guarantee excellent survival rates.

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Different Therapeuthical Approach to Advanced Gastric Cancer: The Experience of Two European Centres

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Objective: The overall survival rate for Advanced gastric cancer (AGC) is poor in most series of surgically treated patients. However, evidence of better results with perioperative treatment is increasing. The purpose of our study is to analyse the two case studies of patients operated in an Italian Institution and patients treated in an English Department Hospital, assessing the various prognostic factors.

Materials and Methods: Data of 265 patients operated in two European centres, between 2003 and 2009, were retrospectively reviewed with prospective follow-up. While in the Italian centre a therapeutical approach is surgery alone or surgery plus adjuvant chemotherapy, in Britain a perioperative approach (based on the MAGIC trial by Cunningham) is considered nowadays the gold standard.

Results: Downstaging (T parameter) was obtained in 54.4% of patients who underwent neoadjuvant chemoptherapy.30-day mortality records are similar in the two groups (5.3% Italian Center vs 7.2 %British Centre p = 0.50). The median of the lymph nodes (LN) removed is higher in the Italian Centre (27 LN [range 3 – 80] vs. 16 LN [range 0 – 40] then in the British Centre (P < 0.0001). Multivariate analysis confirms as prognostic indicators: age at surgery (p = 0.02), stage of parietal invasion, lymph node RATIO, residual disease, location of the tumor, and post-operative chemotherapy (p = 0.01). Peri-operative chemotherapy, although not significantly (p = 0.09, probably due to the few number of recruited patients), seems to reduce the risk of death (HR = 0.29).

Conclusions: Our analysis seems to confirm that perioperative chemotherapy is effective in terms of downstaging, but its effect in terms of survival is likely to be influenced, as previously highlighted in literature, by the extent of lymphadenectomy.

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Intracordal Injection of Autologous Fat for Management of Unilateral Vocal Fold Paralysis: Follow-Up at Two Years

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Objective: To evaluate the long-term (24 months) efficacy of autologous fat injection laringoplasty for treatment of unilateral vocal fold paralysis.

Methods: Forty-five patients received autologous fat injection laringoplasty but only thirty-two were examined 2 years after treatment. Evaluations were made based on patients subjective ratings, digitized videostroboscopic measurements, maximum phonation time and phonation quotient.

Results: The patients self-ratings and videostroboscopic measurements of glottal closure were significantly improved after treatment, but a tendence to fat resorption was noticed in the long run. No serious adverse events were observed.

Conclusions: Certainly, this techinque led to good short-term results but no long-term side-effects were found after injection treatment.

Some resorption was noted for fat, and approximately 25% of the patients chose re-treatment 2 years after the initial treatment.

Data confirm that the intracordal injection of autologous fat is a useful and safe procedure in patients with unilateral vocal fold paralysis. However, the impossibility of exactly predicting the amount of resorption of the injected fat and the lack of predictability of the result duration led the authors to reduce its current use.

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Acute Cholecystitis in Polycystic Liver: Laparoscopic Treatment – Case Report and Literature Review

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Objective: Polycystic liver (PL) consists of a macrocystic degeneration of the liver regarding more than 50% of its volume. Laparoscopic surgery has positively modified the management of PL. This report describes a case of lithiasic acute cholecystitis occured in a PL, inducing the surgeon to treat both the diseases, thanks to laparoscopic benefits.

Methods: M.P., a 48 years old male, affected by PL, arrives in emergency department suffering a lithiasic acute cholecystitis, clinically and radiologically evident. Laparoscopic surgical treatment is performed: cholecystectomy with intraoperatory cholangiography and fenestration of the bigger cysts (15 cm).

Results: Operative time: 135 minutes. Post operative hospital stay: 7 days.

Complications: Long intestinal canalization and abdominal pain due to cystic fluid similar to byle, treated and solved conservatively. 1 year follow up: no symptoms, good liver status, radiological evidence of persistence of cysts, with max diameter no more than 5 cm. In literature different studies describe a fenestrated cysts relapse and symptoms relapse of 9% and 4,5%, with a reduction of liver volume of 12,5% (9,5–24,7%).

Conclusions: The fenestration of cysts, thanks to laparoscopy, has become the best treatment of PL. The magnified view of laparoscopy and the angulation of the 30° optic permit to operate in tight spaces and to treat in the same time concomitant diseases. Laparoscopic treatment is a minimally invasive approach, with fewer risks, fewer hospital stay and excellent outcomes.

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Laparoscopic Management of Large Hiatal Hernia: Surgical Controversies

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Objective: Laparoscopy, thanks to its minimally invasive approach and to its better view, has become the standard surgical approach either for gastroesophageal reflux disease or large hiatal hernia repair. Nevertheless there's no consensus on the right surgical technique in the management of large hiatal hernia.

Methods: Gained adequate experience in laparoscopic management of hiatal region and analized international literature, our equipe has developed a personal technique in the management of large hiatal hernia. Our technique consists of reduction of herniated stomach in abdomen; posterior suture of the crura and reinforcement of the cruroplastic using a PTFE mesh. A Nissen – Rossetti fundoplication is performed in all cases at the end of the hiatoplasty.

Discussion: Comparing personal experience and literature we have optimized this technique: reinforcement of cruroplastic if hiatus is larger than 4 cm, condition with high rate of relapse; we prefer PTFE since it is floppy and reduces risk of erosion on esophagus; posterior cruroplastic; keyhole collar shape of the mesh, to equally distribuite tension; fixing of mesh with tack on the right and nonabsorbable stitches on the left to reduce iatrogenic lesions. Finally, careful selection of patients, to assess cases of short esophagus. In these patients a Collis-Nissen gastroplasty is to perform to achieve a tension-free intra abdominal repair.

Conclusions: Laparoscopic prothesic hiatoplasty is a safe and efficacious procedure, but to achieve a low rate of complications and relapse is necessary to optimize the technique. We advocate multicentric studies to solve the controversies.

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Descending Perineum Syndrome – One Step Multidisciplinary Surgical Treatment

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Objective: Rectal intussusception and rectocele are the main causes of obstructed defecation syndrome. Usually we can find concomitant urogynecological diseases, such to define this condition "descending perineum syndrome".

Methods: Our equipe treats descending perineum syndrome in the contest of a multi-specialized dedicated team. Patients have been enrolled according with a Longo's ODS score system ≥ 12 and with radiological evidence of rectal intussusception and rectocele: from 2007 to 2011 we have performed 63 STARR for rectal prolapse and rectocele, Transtar in 13 cases. There was enterocele in 5 cases, conditions treated laparoscopically, 3 of which presenting also urogynecological disorders. In this cases operation is conduced together with the uro-gynecologist.

Results: We have a middle follow-up of 27 months (6–48), based on pre and post-operative clinical evaluation: great improvement (ODS score ≤ 3) in 51 patients (80,9 %); improvement (ODS score between 4 and 9) in 8 patients (12%); no improvement (ODS score ≥ 10) in 4 patients (6,3%). We had complications in 9 patients (14,3%): persistent urgency (more than 6 months) in 4 patients (6,3%); 2 (3,2%) anastomotic dehiscence caused by a faulty shot of PPH, repaired intraoperatively; 3 (4,7%) chronic pelvic pain. Recurrence rate of 7,9% (5 patients).

Conclusions: We think that pelvic floor is to consider a morphologic and functional unit, to treat multidisciplinary. This approach permit to operate in safe condition and to optimize patient management, since treating more diseases contemporary, a quicker and more efficient recover of our patients can be achieved.

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Stapler versus Laser Techniques for Interlobar Fissure Completion During Pulmonary Lobectomy: A Prospective Randomized Trial

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Objective: Alveolar air leakage, often resulting from lung tissue traumatization during dissection of fissures, remains a challenging problem in lung surgery, leading to increased morbidity with prolonged hospitalization and greater costs. This prospective, randomized trial was designed to compare two different techniques for completion of fissures during pulmonary lobectomy.

Primary end-point was the evaluation of post-operative air leakage, secondary end-points were the evaluation of complications, hospital stay and costs.

Methods: 33 patients were enrolled, 18 were treated with standard technique by using staplers (S) and 15 received laser (L) dissection. Preoperative characteristics were similar between two groups. Randomization was intraoperative after evaluation of presence of incomplete fissure (grade 3–4 following Craig's classification). A rescue treatment was allowed in case of intraoperative grade 3 (according to Macchiarini scale) air leakage after completion of fissure.

A Thulium laser 2010 nm (Cyber TM, Quanta System, Italy) was used at power of 40 watts.

Results: Air leakage (1.8±2.5 vs 3.2±7.8 days; $p = 0.40$), hospital stay (6.3±2.3 vs 9.4±7.6 days; $p = 0.18$), complications (20% vs 50%; $p = 0.07$), hospitalization costs (5137 sv 7779 euros; $p = 0.11$) were lower in L compared with S group even not reaching significant values. Procedure cost was significantly lower for L group (124 vs 524 euros; $p < 0.001$), while operative time was longer (194±32 vs 163±40 minutes; $p = 0.02$).

Conclusions: The use of laser dissection to prevent postoperative air-leak is effective and comparable with stapler technique. Aero-haemostatic propriety of laser allows a safe application during pulmonary lobectomy with interlobar fissure completion avoiding staplers.

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Treatment of Locally Advanced Colic Cancer with Abdominal Wall Abscess. Report of a Case

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Objective: Colon cancer rarely combines with abscess of the abdominal wall. We here describe a case treated by extensive surgery, biological mesh abdominal wall repair and negative pressure therapy system.

Methods: A 58-year-old woman presented with a locally advanced right colon cancer associated with abdominal wall abscess with no evidence of distant metastasis. Extended right hemicolectomy was performed with en-bloc excision of the bladder dome, the right annex and full thickness removal of the anterior abdominal wall including the abscess (diameter 38 x 30 cm). Abdominal wall repair was perfomed by a biological mesh (Permacol R). To facilitate healing the patient was then treated with Vacuum Assisted Closure (VAC) therapy.

Results: Histology showed a mucinous (dominant) moderately differentiated adenocarcinoma without nodal metastases (n = 57). Surgical margins were tumor free. The abdominal wall was also tumor free. The postoperative clinical course was uneventful. VAC therapy treatment reported excellent results in terms of active promotion of the granulation tissue, this allowing for a subsequent placement of a skin flap. At the present, the patient is alive, well and disease-free two months after surgery.

Conclusions: The present case shows some peculiar characteristics such as the size of the initial lesion, the abdominal wall abscess and the use of innovative devices such as biological mesh and VAC therapy. We demonstrate that extensive surgery for locally advanced colon cancer, in high-volume centers, provides for favorable expectations in terms of survival and quality of life.

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Safety of Thoracic Surgery in Patients with Anti-Platelet Therapy

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Objective: Recent recommendations of American Heart Association have changed preoperative management of patients with anti-aggregation. We assessed safety and outcomes of surgery in patients who were taking anti-platelet therapy (APT). In this study, we report our results.

Methods: Prospective study of consecutive series of patients operated on while receiving APT. Using propensity score-matching methods, these patients were matched (ratio 1:4) with patients

Table 1 (for Abstract 194)

Patient characteristics	Patients receiving anti-platelet therapy (n = 41)	Propensity score-matched patients not receiving anti-platelet therapy (n = 141)
Age, y (mean) ± SD (range)	67 ± 5 (47–81)	67± 8(49–71)
Male, No. (percentage)	24 (59%)	103 (73%)
Female, No. (percentage)	17 (41%)	40 (28%)
History of coronary artery disease, No. (percentage)	20 (49%)	78 (55%)
Coronary stent, No. (percentage)	10 (24%)	42 (30%)
History of peripheral vascular disease, No. (percentage)	11 (27%)	17 (12%)
Patient on double anti-platelet therapy	9 (22%)	0
Type of surgical operation		
• Lobectomy	18	68
• Mediastinoscopy	9	28
• VATS ± wedge resection	9	25
• Wedge resection	2	9
• Decortication	2	8
• Thymectomy	1	3
Intraoperative and postoperative outcomes		
• *Redo* thoracotomy for bleeding, No. (percentage)	0	2 (1%)
• Average hospital length of stay, d (range)	4.3 (0–6)	5.5 (0–28)
• Postoperative surgical morbidity, No. (percentage)	0	5 (4%)
• Postoperative medical morbidity (including blood transfusions), No. (percentage)	4 (10%)	23 (16%)
• Post-operative mortality, No. (percentage)	0	2 (1%)

who were not receiving APT. Logistic regression analysis was used to identify covariates among baseline patient variables imbalanced. Resulting matched patients were analyzed for differences in selected intraoperative and postoperative outcomes. Pearson's χ^2 test and Fisher's exact test was used to calculate probability value for dichotomous variables comparison. Statistical and mathematical models were create and analyzed using Wolphram Mathematica 8.0.

Results: Between January 2008 and February 2011, 41 patients received APT at time of surgery were matched with 141 patients who were not receiving APT (Table 1). There were no significant differences between 2 groups. Indications for APT, types of operations and outcomes are shown in Table. None of patients required a reoperation for bleeding. Two patients received blood transfusion. Amount of chest tube drainage was not statistically significant different. There were no statistically significant differences between outcomes for patients receiving APT compared with controls for operative time, hospital length of stay, or morbidity.

Conclusions: Even if further studies are needed, thoracic surgical procedures can be safely performed in patients who are receiving APT at time of surgery.

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Hyaluronic Acid in the Prevention of Adhesions on Polypropylene Endoperitoneal Meshes. Experimental Study

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Introduction: The aim of this study was to verify the effectiveness of hyaluronic acid in preventing adhesion formation after endoperitoneal surgery in which prosthetic polypropylene mesh is placed directly on the viscera.

Methods: Forty albino rats were included in this study and the animals were randomized to the following 4 groups each with 10 rats: polypropylene prosthesis (PP), PP+hyaluronic acid (HA), Hertra prosthesis (HP), HP+HA. A large defect was created the anterior abdominal wall of each rat and repaired in different ways. In the first group a polypropylene mesh was placed intraperitoneally, while, in the second group the peritoneal surface of the mesh was impregnated with HA. In the third group a Hertra 0 polypropylene rigid mesh was placed intraperitoneally and, in the fourth

group, the peritoneal surface of the Hertra 0 mesh was impregnated with HA. Clinical controls on the animals were carried out at 1 months. Controls and the prosthetic explantation were randomly carried out at 3 and 6 months. An assessment of adhesion formation was performed, evaluating the quantity and tenacity of the adhesions.

Results: We demonstrated higher levels of adhesions in rats with PP than in those with HP and lower levels in rats with a protective layer of hyaluronic acid. The amount of fibronectin in the periprosthetic fibrotic tissue and the histological score confirmed the previous data.

Conclusions: Hertra 0 mesh with HA provided the best results in terms of physical stability and resistance to adhesion formation.

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Anastomotic Dehiscence after Colonic Resection. Analysis of Risk Factors

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Introduction: Intraperitoneal sepsis due to anastomotic leakage significantly affects the outcomes of intestinal surgery. The aim of this retrospective review is to examine retrospectively general and local factors involved and their prognostic value.

Patients and Methods: Between April 1998 and December 2010, 400 patients underwent elective (240 = 60%) or emergency (160 = 40%) primary colonic resection for benignant (80 = 20%) or malignant (320 = 80%) disease. We performed 130 right colon resections with immediate anastomoses (primary resection), among which 68 (52.3%) were emergency and 62 (47.7%) elective; 180 left colon, among which 80 (44.4%) were emergency and 100 (55.6%) elective; 90 rectal primary resections, among which 15 (16.6%) were emergency and 75 (83.4%) elective. We considered stapled or manual anastomoses, protective stomas and medical comorbidities.

Results: Perioperative mortality rate was 7.0% for emergency and 3.8% for elective procedures. The leak rate was 10% (40/400), 15.3% for emergency and 6,3% for elective procedures. Fistula affected 10/130 (7.1%) ileo-colic, 15/180 (8.3%) colo-colic and 15/75 (16.6%) colo-rectal anastomoses, 8 of these in emergency. 25 dehiscences were treated conservatively (3 of these were reoperated), while 11, severe and all located in left colon, underwent a Hartmann's procedure, with a perioperative mortality rate of 33,3% in emergency.

Conclusions: In our experience, the site of colonic anastomoses represents the risk factor more strictly related to anastomotic leak rate; medical comorbidities are found in anastomotic fistulas in a significantly high percentage of cases (62,5%).

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Surgical Management, Morbidity and Prognostic Factors of Survival in 70 Consecutive Patients with Hilar Cholangiocarcinoma

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Introduction: Hilar cholangiocarcinoma is a rare tumor accounting for less than 1% of all malignancies. This study was conceived to assess multimodal treatment including surgical approach and to determine postoperative morbidity, mortality rate and prognostic factors for long-term survival.

Methods: From March 2002 to December 2008, 70 patients with a Klatskin tumor were evaluated in our institution. Clinicopathological data were analyzed and univariate and multivariate analyses carred out to determine significant prognostic factors affecting morbidity and mortality. Mean age was 63 ± 8.9 years, M/F ratio was 48/22.

Results: Of 70 patients, 15 were unresectable (group A) and treated with palliative stenting. The other 55 patients underwent surgery (group B): n = 3 for Bismuth type II, n = 18 for Bismuth type IIIa, n = 23 for Bismuth type IIIb and n = 11 for Bismuth type IV. Vascular procedures (arterial and/or portal reconstruction) were performed in 13 patients. In-hospital mortality and overall morbidity rate were 5.5% and 32.7 % respectively. After a median FU of 29.9 months (1–87) median OS was 3.4 months in group A vs 29.9 months in group B ($p < 0.001$). R0 resection was achieved in 39/55 (71%) patients. Extended hepatectomy had the highest R0 rate (88.2% 15/17 patients). Three and 5 years survival rate was higher in R0 vs R1-R2 resection (55% vs 30%, 41% vs 17% respectively, $p < 0.001$). Identified prognostic factors were: R1-2 resection, lymphatic and perineural invasiveness, T stage, positive lymphnodes and poorly differentiation.

Conclusion: Surgical approach of Klatskin tumor is the only chance for long-term survival with an acceptable surgical mortality rate. Radical surgery is the only factor leading to significant long-term survival. Extended hepatectomy provide the highest "R0" rates. Vascular reconstruction does not significantly increase overall morbidity. Multivariate analysis showed that poorly differentiated tumors, perineural infiltration and incomplete resection correlates with shorter survival.

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The Effect of Preoperative Chemoradiotherapy on Lymph Nodes Harvested in Laparoscopic TME for Rectal Cancer

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Background: Adequate lymph node resection in rectal cancer is important for staging and local control. This study aims to verify the effect of neoadjuvant chemoradiation, as well as some clinicopathological features, on the yield of lymph nodes in rectal carcinoma.

Material and Methods: Data on consecutive patients who had laparoscopic total mesorectal excision for rectal adenocarcinoma at a single cancer center between July 2005 and July 2010 were reviewed. No patient had any prior pelvic surgery or radiotherapy. Patients had neoadjuvant chemoradiotherapy if they were stage II or III.

Results: A total of 79 patients were included. The mean age was 67.1 years (range 36–84). Twenty-six patients (33%) received neoadjuvant therapy before resection. The mean number of lymph nodes removed was 14.4 (range 3–39) per specimen. There was less lymph node yield in patients who received neoadjuvant therapy (11.6 vs. 15.6, p 0.05). Only 46% of patients who had preoperative therapy had 12 lymph nodes or more in the specimen as opposed to 64% of those who had surgery upfront (p: 0.03). Other factors associated with lower lymph node yield included stage (p 0.03) and grade (p 0.007) of the tumour. Age, sex, site, type of operation, surgeons and pathologists did not affect the number of lymph nodes removed.

Conclusion: In laparoscopic surgery preoperative chemoradiotherapy for rectal cancer results in reduction in lymph node yield. Early cancer and low-grading also associated with retrieval of fewer lymph nodes. The role of neoadjuvant therapy should be considered in the staging and in the correct nodes dissection of rectal cancer.

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Accuracy of Intraoperative Touch Imprint Cytology for Detection of Sentinel Lymph Node Metastases in Breast Cancer Patients

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Objective: Sentinel node biopsy is the standard for axillary staging in early breast cancer. Completion axillary dissection is performed in positive sentinel lymph node patients, even during a second, delayed, operation. Intraoperative evaluation of sentinel node allows immediate axillary lymphadenectomy. The aim of the study was to verify the accuracy of imprint cytology as an intraoperative method for sentinel node assessment, in order to determine the percentage of patients in which a second operation could be spared.

Methods: Eighty-four early stage breast cancer patients underwent intraoperative imprint cytology of sentinel lymph node during the last 14 months. Also permanent sections were made and evaluated with H&E and immunohistochemical staining. The accuracy of intraoperative assessment of sentinel lymph node was tested by comparing imprint cytology results with final histology and immunohistochemical data.

Results: In 7 of 18 patients with positive sentinel lymph node at final pathology, imprint cytology of at least one sentinel node was positive. Touch imprint cytology failed to show metastatic involvement in 11 nodes: of these, 5 nodes had micrometastases. Sensitivity of imprint cytology was 38.8%, specificity was 100%, with no false positive cases. Out of 18 sentinel node positive cases, 7 patients avoided a second operation.

Conclusions: Intraoperative assessment of sentinel lymph node by touch imprint cytology is a useful method for evaluating sentinel node metastases in early breast cancer patients and allows axillary dissection during the same surgical procedure in a significant number of patients.

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Laryngeal Chondrosarcoma: Report of 3 Cases and Review of Literature

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Objective: Chondrosarcoma is a malignant tumor of cartilaginous nature. In the head and neck region, only 300 cases were reported. It's the most frequent non-epithelial cancer of the laryngeal area, occurring in the posterior portion of the cricoid cartilage but also in the thyroid cartilage, epiglottis, arytenoids. The true incidence is difficult to assess because, many low-grade chondrosarcomas have been misinterpreted as chondromas. The three degrees of histological differentiation are the well differentiated, moderately and poorly differentiated, are the best predictor of clinical behavior. The treatment is surgical, conservative, if it can respect the organ's function. Recurrences are frequent Risk factors for relapse are incomplete resection and tumor grade. Chondrosarcoma has a good prognosis with survival rate of 70–80%.

Methods: From January 2010 to September 2010, 3 patients with laryngeal-tracheal chondrosarcoma low, medium and high histological grade, were subject to resection of the lesion using a conservative surgical approach. Two patients, underwent tracheostomy prior to laryngeal recanalization with CO2 laser and YAP, the third patient underwent a reconstructive laryngectomy (tracheohyoidoepiglottopexy).

Results: In all the three cases treated, the clinical course was uneventful, but in one case after 5 months, a fasciocutaneous flap was positioned for closure of a pharyngo-tracheal fistula. Laryngeal tracheoscopy control at 1 month has documented the absence of residual lesions, good re-epithelialization of the mucosa

and a good recovery of the airway space, at 6 months, all three cases appeared to be free from recurrence.

Conclusion: Laryngeal chondrosarcoma is a rare tumor. It's advisable to perform a complete resection with a long-term follow-up to ensure early detection of a possible recurrence allowing again a conservative treatment.

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Unilateral and Bilateral Paralysis of Vocal Cords: Our Experience

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Objective: To report our experience on treatment of bilateral and unilateral vocal cord palsy.

Methods: 60 cases of laryngeal diplegia and 5 cases of laryngeal monoplegia were treated in our department from 1999 to 2009. Mean age of patients was 55 years (range 32–74); women was involved much more (85% in bilateral and 80% in unilateral), reflecting the cause of paralysis (more frequency of thyroid disorders). 35 out of 60 bilateral palsy (60%) had undergone an emergency tracheotomy for acute onset of dyspnea; the remaining had more slowly onset of diplegia, developing respiratory compensation. All patients had preoperative phoniatric evaluation and logopedic therapy with poor results.

Results: The first surgical procedure in bilateral paralysis was a posterior endoscopic ventriculocordectomy in 40/60 (67%) and a cordectomy with medial arytenoidectomy in 20/60 all by CO2 laser. A revision surgery, for persistence of wheezing, was necessary in 32% (13/40) of ventriculocordectomy always by the means of CO2 laser. All the five unilateral paralysis was treated with classical Remacle technique (one patient with autologous fat, otherwise three with Vox Implant® – we didn't notice difference between the two methods on functional outcomes).

Conclusion: None of bilateral patients reported persistence of dyspnea (primary end-point), even under moderate stress, and in all cases we achieved an acceptable score on VAS for quality of voice. All the unilateral patients had good functional outcome and were satisfied (primary end-point), increasing the maximum phonation time and signal/noise ratio; moreover the subjective assessment of voice quality with VAS was excellent.

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Hepatic Resection with Habibtm 4X Guided by Intraoperative Ultrasound

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Objective: To evaluate the role of Intraoperative Ultrasound (IOUS) for liver resection with the HabibTM 4X (Angiodynamics, Queensbury, NY, USA), a new multi-electrode radiofrequency device.

Materials and Methods: From May 2010 to February 2011, 14 patients (8 M; age: 56–81) with 14 liver tumors (9 Hepatocellular carcinoma in Child-Pugh A class cirrhosis, 5 Colorectal Cancer Metastasis) underwent hepatic resection guided by ultrasound. The first time of surgical approach always consisted in the complete mobilization of liver and to perform the IOUS. Liver resection was always accomplished without intermittent portal pedicle clamping (Pringle's maneuver). IOUS allowed the accurate location of tumor, its margins and the relation with intrahepatic vascular structure and subsequently to draw the resection line on the liver surface, 5 mm away from the edge of the tumor with an argon diathermy. Liver resection was performed with scalpel after introduction, under ultrasound guidance, of the HabibTM 4X, a radiofrequency device with two pairs of electrodes producing a line of coagulative necrosis.

Results: The introduction of HabibTM 4X, always under ultrasound guidance, avoided the injury to large vascular and biliary structures and allowed to perform always minor or non anatomical resection to maximize sparing of the liver parenchyma. Histologic examination did never show tumor on the margins of specimen. The median hospital stay was 8 days (range: 7- 10 days). No blood transfusion was administered. No major complications occurred. In 4 patients with HCC and liver cirrhosis, a minor complication was transient ascites disappeared in 2–4 months with medical therapy. In 1 patient with postoperative subphrenic abscess, percutaneous drainage was performed.

Conclusions: IOUS allows to show the correct location of electrodes of HabibTM 4X and, afterwards, to perform hepatic resection rapidly, safety and with sparing of the liver parenchyma.

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Distal Femur and Distal Tibia Fractures Treated with MIPO Technique: Mid-Term Outcomes and Multiple Stage Surgery

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Objective: A prospective evaluation of radiographic/clinical outcomes and postoperative complications in patients treated for distal femur and tibia fractures with MIPO technique.

Methods: Between February 2009 and December 2010, at the University Hospital of Rome we treated 25 patients (28 fractures) with distal femur and distal tibia fractures using the MIPO technique. The mean age of the patients was 50y (13f, 12m), 21 with distal femur and 7 with distal tibia fractures. AO classification system was used. Minimum follow up was of 6 months (6–20). Clinical assessment was performed at 3,4,6,12 and 20 months after surgery evaluating range of motion and according to Lysholm and Olerud/Molander questionaire. Radiographic assessment was performed post-operatively and consequently every 2 months up to 1 year using the standard AP and LL views. Damage control and multiple stage surgery was used when necessary.

Results: The mean healing time was 12 weeks. No significant varus/valgus deformities or rotational defects were detected. We observed very good clinical outcomes with high range of motion and complete weight bearing after bone healing. A high Lysholm and Olerud/Molander questionnaire score was obtained. There were no cases of pseudoartrosis, superficial/deep infection, implant failure or hardware impingement. To date none of these implants was removed.

Conclusions: Several studies have observed very good outcomes and a very low rate of complications in treating these fractures with MIPO technique. Our experience confirms the validity of the technique.

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Objective Outcome of Laparoscopic Total Fundoplication in NERD and ERD Patients

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Objectives: Non-erosive (NERD) and erosive (ERD) gastroesophageal reflux disease (GERD) show similar severity of symptoms and impact on quality of life. Surgical outcomes for different stages of GERD are still unclear. Aims of this study were to investigate on clinical and instrumental outcomes of laparoscopic total fundoplication in the spectrum of GERD.

Methods: Clinical and instrumental (upper endoscopy, high resolution impedance manometry and 24H combined impedance-pHmetry) outcomes were prospectically collected before and after laparoscopic total fundoplication for the treatment of PPI refractory subgroups of GERD patients.

Results: Preoperative patterns of GERD were different between NERD and ERD groups. However, postoperative QoL, PPI use, LES pressure, esophageal motility, acid exposure time, number and quality of reflux, SI and SAP were similar in different subgroups of GERD.

Conclusions: Patients with PPI-refractory NERD and ERD benefit equally from laparoscopic total fundoplication. Accurate preoperative selection is mandatory to obtain the best reflux control and good patient satisfaction.

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Sliding Hiatal Hernia Diagnosis: Accuracy of Different Testing and their Implication in Laparoscopic Surgery

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Objectives: Accurate diagnosis of sliding hiatal hernia (HH) is somewhat challenging. Different instrumental techniques are currently used, without a great accuracy and/or in intraobserver accordance in measuring the right extension of migrated gastric wall. Thus, predicting a correct size of HH and effects of pneunoperitoneum on reducing this value can be an important parameter to know for surgeons. Aims of this study were to investigate on diagnostic accuracy by three techniques on HH and in vivo effects of pneumoperitoneum.

Methods: Instrumental evaluation of HH was performed by the mean of upper endoscopy, X-ray barium swallow and high resolution impedance manometry (HRiM), according to Hill classification. In vivo measurement of HH size were assessed in open surgery group and in laparoscopic surgery group.

Results: Higher diagnostic accuracy rate was obtained by HRiM, which was capable to measure extension of gastric wall through diaphragm pillars according up to 96% with open surgery measurement. Pneumoperitoneum was found to be able to reduce HH size up to 2 cm.

Conclusions: HRiM offers the most accurate measurement of HH extension. Knowing precise HH size and its reduction by pneumoperitoneum can be helpful for surgeons approaching HH patients.

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The Value of the Barcelona Clinic Liver Cancer (BCLC) Algorithm in Clinical Practice: A Study of 164 Hepatocellular Carcinoma (HCC) Patients

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The study analyzed retrospectively 164 HCC patients comparing our decision making with BCLC. Analyzing our conduct, the algorithm would have not changed the decisions made, which still require the experience of clinical centre involved and need to take into account hepatic function, age and associated diseases as recently widely agreed.

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Could Lymph Node Ratio Have a Predictive Role in Developing Colorectal Liver Metastases?

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185 patients belonging to the C1-C2 Astler Coller Dukes group had been statistically analyzed. The examination of our data proved a statistical dependence between LNR and develop of CRLM (ptrend = 0.0007). Our study suggests that is useful being aware of not only the number of LN sampled or the number of positive LN, but also of LNR that could be considered an important prognostic factor.

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"Chemotherapy Associated Liver Injury (CALI)" in Paedriatic Patients Affected by Resectable Hepatic Malignancies

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In our patients we found hepatocyte ballooning, portal inflammation but no any sign of steatohepatitis or necrosis without any CALI phenomena. Other studies are required to clarify why paediatric liver is not affected by CALI, whether paediatric liver responds differently to stress or whether the different childhood cancer chemotherapy schedule can be completely safe in the early period.

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Modern Approach to Revision Total Knee Replacement

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Objective: Along with the increase in primary TKR there is an increase in the number of revisions. According to bone loss AORI classification and state of collateral ligaments, we present a modern algorithm to manage the revision TKR.

Methods: Thirty-five consecutive knee revisions were performed at our institution. Causes of failure of index TKR were infection, polyethylene wear, aseptic loosening and pain. Removed implants got through unicompartmental to hinged prostheses. Postero-stabilized, semiconstrained and hinged devices were implanted. Cement, morcellized autografts, metal augmentation and tantalum cones were used to manage bone loss. Maximum follow-up was 7 years.

Results: Average HSS score improved from 41 preoperatively to 87 ($p > 0.001$), whereas average range of motion increased from 65 preoperatively to 112($p < 0.01$) at the latest follow-up. One patient developed subsidence of the tibial component that required a new revision. Other causes of failure of the revision were recurrence of infection in 1 case that required arthrodesis and persisting pain in 1 case that needed a re-revision. One patient presented wound necrosis managed with a muscle-flap, while a patient developed a immediately postoperative popliteal artery spasm that required a femoro-tibial by-pass.

Conclusions: Knee revisions represent more complex and less successful procedures with a higher rate of complications than primary TKR. Absence of clear guidelines about revision TKR could depend on the high complexity of the knee revision surgery. Modern approach to revision TKT is presented according to severity of bone loss and state of collateral ligaments.

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BRCA1/2 Mutational Analysis in Male Breast Cancer Patients

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Objective: Breast cancer in men occurs approximately 1% of all breast cancer cases worldwide. An important predisposing genetic factor for breast cancer in males includes germline mutations in BRCA genes, especially in BRCA2 than BRCA1.

The aim of this study was to detected BRCA1/2 germline mutations, rearrangements and CHEK2 1100delC mutation in 4 male affected with breast cancer in a cohort of 83 probands.

Methods: DNA was isolated from peripheral blood. The entire 22 exons of BRCA1, 26 exons of BRCA2 and flanking splice site regions were amplified by PCR and than sequenced.

In order to detect large genomic rearrangement in BRCA1/2 and CHEK2 1100delC mutation we used Multiplex ligation-dependent probe amplification (MLPA). The mutations identified were analyzed using prediction on line programs (in silico analysis).

Results: The present study revealed in one patient a novel missense variation in BRCA2, N2644D, not been reported in Breast Cancer Information Core (BIC) database. In another male we found an intronic unclassified variant, IVS2+62 t>g.

Two of the three prediction algorithms used are agreed to consider the novel missense variation N2644D in BRCA2 as damaging. IVS2+62 t>g represents a rare variant but not disrupting normal mRNA processing, as showed by in silico analysis.

No genomic rearrangement in BRCA1 and BRCA2 or CHEK2 1100delC were found in any examined patients.

Conclusion: The novel missense mutation identified in this study could affect protein function. Our data should be integrated with functional studies, so as help elucidate information about its role in breast cancer predisposition.

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Arg72Pro of p53 Influence the Clinical Course and the Surgical Treatment of Ulcerative Colitis

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Objective: In the proline-rich domain of Tp53 occurs a common polymorphism, Arg72Pro. This polymorphism clinically may be related to the development of different types of cancers, such as breast, lung, cervical, colorectal and hepatocellular carcinoma. Previous studies report a correlation between Pro72 homozygosity and the clinical course of ulcerative colitis (UC).

We aimed to evaluate Arg72Pro genotype in UC patients underwent colectomy.

Methods: The distribution of the different genotype of Arg72Pro was studied in 264 patients affected with ulcerative colitis, 234 noncolectomized and 30 colectomized patients. The colectomized patients had not responded to any drug therapy and were undergoing a surgical intervention of IPAA. From all patients blood samples for genotyping were collected. Arg72Pro genotype analysis was carried out by polymerase chain reaction with confronting two-pair primers (PCR-CTPP).

Results: In noncolectomized patients (n = 234) Arg/Arg, Arg/Pro and Pro/Pro frequencies were 51.28%, 41.02% and 7.7%, respectively, while in colectomized patients (n = 30) were 53.4%, 23.3% and 23.3%, respectively. A statistically significant association was found between Pro/Pro and colectomy ($p = < 0.0059$, $X2 = 7.59$).

Conclusions: Our results showed that the Pro/Pro genotype was higher in colectomized (23.3%) compared to noncolectomized (7.7%). In UC patients the proline homozygosity determines resistance to any standard pharmacologic therapy, favouring the use of surgical treatment.

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Study of Tumor-Infiltrating and Circulating Lymphocytes in Patients with Cutaneous Melanoma

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Introduction: Metastatic melanoma is still associated with a poor prognosis and its treatment has remained challenging. Increasing interest has developed towards immune response and possible therapeutical implications. Tumor-infiltrating lymphocytes (TILs) have been documented in a wide variety of solid tumors including melanoma, and are supposed to play an important role in the anti-tumoral surveillance. In particular, a prognostic role has been proposed for the presence of peritumoral T cells.

Methods: Peritumoral skin biopsies and blood samples were taken from 74 patients with cutaneous melanoma. Peritumoral and peripheral lymphocyte subpopulations were analysed in terms of phenotype and effector functions. The immunological analysis was related to the clinical status of the patient.

Results: TILs were isolated in 54% of patients. T cells were the predominant population of both tumor-infiltrating and circulating lymphocytes, the most represented subpopulation being V2 T cells, with an effector memory phenotype and a significant cytotoxic capacity toward tumor cells after in vitro stimulation. Mortality and relapse rate were higher in patients in which peritumoral T cells were not isolated.

Conclusions: T cells seem to play a pivotal role in the immune response against melanoma, and show potential value as a prognostic indicator. They could also be novel targets for immunotherapeutical approaches, but further insight is needed.

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Quality of Life, Clinical Outcome and Survival in Women Treated with Nerve-Sparing Radical Hysterectomy for Cervical Cancer: A Multicenter Comparative Study

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Objectives: To analyze quality of life, morbidity and survival after a nerve-sparing radical hysterectomy (NSRH) compared to a classical radical hysterectomy (RH) for cervical cancer.

Methods: All consecutive cervical cancer patients undergoing a RH or a NSRH in two Italian Institutions, between January 1997 and November 2009, were asked to fill in a quality-of-life questionnaire.

Results: Fifty-six women were included, of these 31 underwent a RH (Group 1) and 25 had a NSRH (Group 2). Postoperatively, patients suffered more frequently from disuria and urinary incontinence in Group 1 compared to Group 2. During the median 36 months follow up a higher number of patients had urinary incontinence ($p = 0.02$), urinary retention ($p = 0.01$), faecal incontinence ($p = 0.01$) and constipation ($p = 0.01$) in Group 1 versus Group 2. Patients referred a higher rate of severe sexual dysfunction after RH compared to NSRH ($p = 0.03$). No differences were found in orgasmic frequency and sexual desire, indicating that the physical changes do not impact on this aspect of sexuality. The patients' overall quality of life evaluation was more satisfactory after NSRH; no woman of this group reported a deterioration in their quality of life ($p = 0.03$). Finally, NSRH proved to be a safe treatment for early stage and locally advanced cervical carcinoma with OS and DSF rates of 92.9%, with no significant differences compared to RH.

Conclusions: NSRH was demonstrated to have a better clinical outcome, fewer bladder, colorectal and sexual long-term complications were observed. Post-operative quality-of-life was better with the same overall survival for early-stage and locally advanced cervical patients compared to RH.

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Local Treatment of Chronic Cutaneous Leg Ulcers with Recombinant Human Granulocyte-Macrophage Colony-Stimulating Factor

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Introduction: Venous and diabetic foot ulcers are consequence of venous insufficiency and peripheral neuropathy respectively. Among the several cytokines involved in tissue repair, locally applied GM-CSF, by acting at several steps of the wound healing process, could substitute for the trapped growth factors and promote effective tissue reconstruction by stimulating a complex cellular population (neutrophils, monocytes, lymphocytes, keratinocytes, Langerhans and endothelial cells).

Patients and Methods: We evaluated 10 consecutive patients: five patients affected by chronic cutaneous leg ulcers, one with a neuropathic diabetic ulcer and four with vascular ulcers with a long history of ulceration and poor healing prognosis.

Results: The neuropathic diabetic ulcer was completely healed after 4 weeks of therapy; the patient with three venous lesions presented complete resolution of one ulcer, achieved after 2 months of treatment, and stabilization of the other two; patients with two large vascular ulcers improved up to more than 50% of the mean diameter reduction; patient with one venous ulcer did not show any improvement.

No one ulcers increased in size and no one patient developed peripheral blood cell count abnormalities during the treatment (the drug exercises local rather than systemic actions). All the results described were stable after 8 months of follow up.

Conclusions: Our trial showed, in agreement with previously reported experiences, topical rHuGM-CSF as an alternative choice for treating difficult to cure neuropathic diabetic and vascular leg ulcers.

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The Association of Increasing Venous Insufficiency with Increasing Obesity

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Chronic venous insufficiency (CVI) is the most common cause of leg ulcers. Patients with morbid obesity are remarkable for particularly recalcitrant ulcers.

Because obesity is not specifically incorporated in CEAP or other venous scoring systems, we sought to characterize this group of patients more completely.

Methods: Patients with severe CVI (CEAP clinical class, 4, 5, and 6), and class III obesity (body mass index [BMI] >40) were reviewed. Findings from clinical and duplex ultrasound scan examinations were compared with the CEAP classification, its adjunctive venous clinical severity score, and sensory thresholds.

Results: A review of clinic records identified 30 ambulatory patients with a mean age of 55 years, a mean BMI of 50, and a mean weight of 154 kg; all but one had bilateral symptoms. No evidence of venous insufficiency was detected with duplex ultrasound in 44 of the 60 limbs. Although some valvular incompetence was detected with duplex ultrasound in 35 of 60 limbs, these abnormalities were widely dispersed between 28 sites; eight limbs had findings at only one site. Ulceration (mean area, 30 cm^2) was present in 40 limbs and necessitated 7 months for healing; 21 recurred at least once during a mean observation period of 36 months. The mean sensory threshold of 5.21 exceeded current risk thresholds used in diabetic screening programs. The distribution of CEAP clinical class was C4 (n = 22), C5 (n = 20), and C6 (n = 18). Increasing CEAP class correlated with an increased mean BMI of 44, 49, and 53, respectively ($P < .01$). CEAP also correlated with a rising mean venous clinical severity score of 10, 11, and 15, respectively ($P < .05$).

Conclusion: Patients with class III obesity had severe limb symptoms, typical of CVI, but approximately two thirds of the limbs had no anatomic evidence of venous disease. The association of increasing limb symptoms with increasing obesity suggested that the obesity itself contributes to the morbidity.

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Chest-Wall Contouring Surgery in Female-To-Male Transsexuals, A New Surgical Approach for Breast Amputation

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Introduction: The first step in female-to-male gender reassignment surgery is made of chest wall contouring and Hysterectomy with Bilateral Salpingo-Oophorectomy. The surgical technique of breast contouring depends on the mammary size and ptosis. We describe a new surgical technique with creation of a new inframammary fold for patients with mammary amputation and free nipple-areola complex grafting.

Materials and Methods: In our department we treated 30 female-to-male transsexuals, with mammary amputation, new inframammary fold creation and free nipple-areola complex grafting. The procedure starts with the harvesting of the nipple-areola complex as a full thickness graft. Afterwards we proceed with the mastectomy and subcutaneous inframammary fold release. Finally we graft the nipple areolacomplex in the new position.

Discussion: While reviewing our cases we have noticed that this surgical approach gives better results in patients with an higher body mass index. With the subcutaneous inframammary fold release we can achieve better chest wall contouring and chest wall remodeling with a better aesthetic result, as the fold is lifted in the typical male position.

Conclusions: We believe that this is the technique of choice in patients with large breasts that need a mammary amputation and free nipple grafting.

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First-Ray Reconstruction with Segmental Wrap-Around Pedidial Flap

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Background: Hand gloving injuries requiered a dedicate approach to suit every-time different damages the surgeon comes across with. Great toe is ideal for thumb reconstruction if the amputaiton is located at or distal to the middle metacarpal shaft. Distal finger reconstruction with partial toe or warp around flap gives most gratifing result in patients who need distal fingers for jobs or recreation activities.

Case Report: We present the case of a 42 years old caucasian man who underwent to a two stage reconstruction after a crushing avulsion and degloving injury of the left hand. First step was bone fixation, finger revalscularization and nerve reconstruction. Second step was the reconstruction of the soft tissue of the first ray using a tailored sensate free flap from right foot.

Discussion and Conclusions: Use of the wraparound flap permits a greater portion of the great toe to be left with the foot. This resulted in a decrease in donor site morbidity in an attempt to preserve more normal gait and function postoperatively.

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Perforator Mapping in the Trunk: A Guide for Freestyle Flap Surgery and an Introduction to the Sustainable Anatomical Study

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Introduction: Freestyle Perforator flaps minimize flap harvest morbidity and can be harvested anywhere in the body if perforators anatomy is well known. A study of trunk perforator vessels has been performed on recycled CT scans avoiding cadaver investigations or unnecessary radiation exposure.

Materials and Methods: 200 CT scans, performed for the study of liver or pancreatic disease, were examined. No unnecessary radiation was administered. Previous abdominal surgery was reason of exclusion. The trunk between the xyphoid process and

the umbilicus was studied. On axial scans, the trunk was divided in 4 quadrants: Q1 anterior right, Q2 anterior left, Q3 posterior left, Q4 posterior right,. Scans were examined and the position of any perforator >1mm in caliber was measured. The values were transferred on a MS excel® data sheet and analyzed.

Results: The average number of perforators per patient was 25,63 (6,09 Q1, 7,21 Q2, 6,20 Q3, 6,14 Q4). Anteriorly, the majority of perforators were between 0 and 5cm from the midline, while posteriorly between 5 and 10 cm. The perforators are more numerous and symmetric anteriorly (Q1 and Q2). Perforators course within the subcutaneous tissue was vertical or oblique for perforators of the Superior Epigastric Artery, horizontal or oblique for perforators of the lateral intercostal arteries, vertical or oblique for perforators of the posterior intercostal arteries.

Conclusions: The region of the trunk between the xyphoid process and the umbilicus has several perforators of more than 1mm in caliber that might potentially be used as pedicle of free-style flaps. This study provides a map of the location of perforator in the middle trunk to serve as a guide for the surgeon to harvest free style flaps in this area. This study also introduces the concept of recycling existing CT scans for the purposes of anatomical investigation and might encourage others to exploit CT scans databases to collect anatomical information.

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The Occupational Exposure to Noise Aboard Ship (Environmental Monitoring and Dosimetry)

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Title VIII of Legislative Decree No. 81/08 (Physical Agents), obliges employers, risk assessment: air quality, microclimate, noise, vibration, illumination of workplaces, the information and training of workers risks to health and wellness business. Materials and Methods: Class 1 Integrating Sound Level Meter – Mute. – Preamp. -Calib. Sound (IEC60942: 2003)-calibrated measurement uncertainty of 0.7 dB. / Database thickeners for sources not active. We refer values in Leq in dBA and the peak measured in dBC on board ship, the levels produced by typical single Tool-daily personal exposure levels in dBA LAex8h and Max Peak in dBC for all categories of workers exposed. The results of dosimetry are content but in the presence of areas with environmental levels of the auditory medium and high risk, to define and report, with the requirement of use of PPE. It is estimated the clean, noise reduction at the source and noise on transmission, organization that contain more than permissible limits and the exposure to mechanical vibration and simultaneous exposure to heat is severe microclimate. M. C. assess the health impact of noise and the frequency of medical surveillance aimed at risk. For information and training should be considered: – the meaning of the sanitary control – training on noise hazard-testing practical measures of protection measures tec.-org. PPE to reduce exposure-hearing, criteria and methods of use, inconvenience correct-machine use noisier (dBA Leq ≥ 85). D.81 states that the training in question is assessed for degree of learning. With reference to non-risk environments (room officers' mess, the mess hall crew, cabin, captain's cabin, ships office) where the criteria for evaluating the comfort and well planned sound environments for residential, the results demonstrate a general containment of the disturbance from noise.

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The Eplace Professional to Electromagnetic Fields on Board Ship

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The Leg. 81/08 has security measures in the exposure of workers to physical agents (EMF 0 Hz to 300 GHz) at work, consider short-term adverse effects in the human body (eddy current, energy absorption, contact currents), not the possible long-term effects and risks from contact with live conductors. The ELVs EMF concern for the current density f (f ≤ 1Hz-prev. Cardiovascular and CNS effects);-for f ranging from 1 Hz to 10 MHz (Est effects on the nervous system) – The ELVs for SAR f between 100 kHz and 10 GHz (Est thermal stress to the whole body and localized to the tissues). For f between 100 kHz and 10 MHz, they relate to current density and SAR; – for f 10 GHz and 300 GHz ii VLE consider the power density (prevention of excessive heating of the tissues of the body surface. The results on board ship within the limits provided by law. VDT to d. For the visual of 50/60 cm, well within the limits Swedish MPR II (f = 2 to 400 kHz) for E (2.5 V / m) and H (0.025 mT). It must always be reduced to minimum levels of occupational exposure to EMF: adoption of safety;-distance (especially head) to appear. power in operation, turn off unnecessary;-Maintain the electrical connections; Given the interference- a. with phones and electrical / electronic pacemakers. The Employer has indicated the timing of exposure. It is significant for magnetic induction generators and washing machines in operation in the next board. It is believed (after considering the information contained in D. Lgs. vo 81/08) that the health surveillance of workers exposed by the well-MC should also consider the simultaneous exposure to several physical and chemical agents and individual susceptibility to EMF. The activities of information and training are secure strategic targets for prevention and protection related.

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The Artificial Optical Radiation: "The Base Artificial Light in Operating Room and Critical Local Users in a Big Hospital of Campania"

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Introduction: The artificial lighting in the workplace contributes to the visual ergonomic comfort, safety, to its environmental and technological quality. Rif.: DPR 37/97; C.LLPP 13011/74; C. Reg.11/ 04; Reg. Campania- G.R.-7/2/03: Del.518A.G.Coord. Ass. Sa.; Technical standards.

Materials and Methods: Measurements of artificial lighting in the work rooms, in hospital stays and in the service were performed in a hospital in Campania comprising department of General Surgery and Specialties, Services for Critical Members of Anesthesiology and Intensive Care in order to verify levels and comparability. Instruments: Photometer, Radiometer Mod.S4 Hagner. Surveys in the center of daytime local share of 1.5 m. and / or workstations, is related to the natural lighting.

Results: Lux levels ≤ 200 S.O. in General Surgery 1 (S.1), Obstetrics and Gynecology, Traumatological Surgery; about 250 Lux General Surgery.1 (S2) and Dentist Surg. (1e2); of 500 Lux in Pediatric Surgery and about 900 Lux General Surgery .1 (s3), Emergency Surgery; finally 1.400 Lux in Ch.G.Em. (s1 and 2). The local show sterilization levels ≤ 215 Lux General Surgery 1 and 2, Odonto., Pediatric Surgery; Of 300 Lux in Ostetr.e Gin., Trauma-Surgery; of 450Lux in Chir.G.Em. (s1, 2.3). Similar trends [except for Ch.G.1 (s3)], for preparation and waking up users. The local transfers, Biological room and Tr. Seminal fluid show levels ≤ 250 Lux. Considering the references it will be useful planning the adaptation to levels of 1.000Lux (or more) in all operating room, 500 Lux (or more) in all Cleaning and sterilization local, preparation and waking up, Transfer, Room Organic, Seminal fluid treatment level of 300 Lux (or more) in the local surgeons Cleaning Staff. In the local hospital's ICU, where the natural light shows excellent conditions, artificial lighting will be implemented at levels of 1,000 Lux. The periodic monitoring of environmental light levels assumes strategic value. The surgical light shows specific and distinct interest. It will be necessary to study and monitoring it for effectiveness and performance, in the continuous improvement program of Environmental Quality and Technology for healthcare provided by the Hospital.

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