Images in Surgery

This section features outstanding photographs of clinical materials selected for their educational value or message, or possibly their rarity. The images are accompanied by brief case reports (limit 2 typed pages, 4 references). Our readers are invited to sumit items for consideration.

Malignant fibrous histiocytoma of the greater omentum

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A 55-YEAR-OLD CAUCASIAN WOMAN was admitted to our hospital complaining of abdominal pain. Her past medical history was not significant and she had no previous history of abdominal trauma. On physical examination a firm, not-fixed mass about 20 cm in diameter was found in the upper abdomen. Standard blood tests and chest x-rays were normal. Carcinoembryonic antigen, carbohydrate antigen 19-9, and α-fetoprotein levels were normal with only CA125 being increased at 201.9 U/mL (normal, <35 U/mL). Upper gastrointestinal endoscopy showed an extrinsic impression on greater curvature of the stomach with no intraluminal abnormality. Colonoscopy was normal. Abdominal computed tomography showed a solid, large mass occupying the entire upper abdomen with heterogeneous enhancement and some calcified areas. Neither ascites nor uterine or ovarian abnormalities were detected. At laparotomy, a huge tumor originating from the greater omentum was found with no peritoneal spreading or invasion of neighbouring organs (Fig 1). The mass was removed along with the entire greater omentum. The patient recovered uneventfully. At pathology the solid encapsulated specimen (19 × 14 × 9 cm) was pleomorphic and composed of fibroblasts, histiocyte-like cells, and pleomorphic giant cells (Fig 2, *A*), arranged in a storiform pattern. Immunohistochemical stains were positive for vimentin (Fig 2, *B*), CD68 (Fig 2, *C*), and negative for desmin (Fig 2, *D*). Based on these results, a definitive diagnosis of a storiform-pleomorphic variant of malignant fibrous histiocytoma (MFH) was made. The patient underwent mesnadoxorubicine-iphosphamide-deticene–based adjuvant

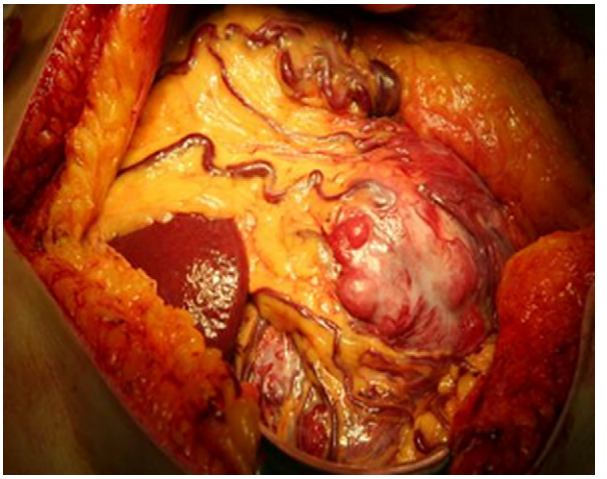

Fig 1. Intra-operative view of malignant fibrous histiocytoma of greater omentum.

Accepted for publication October 1, 2009.

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Surgery 2011;149:455-6.

0039-6060/$ - see front matter

doi:10.1016/j.surg.2009.10.001

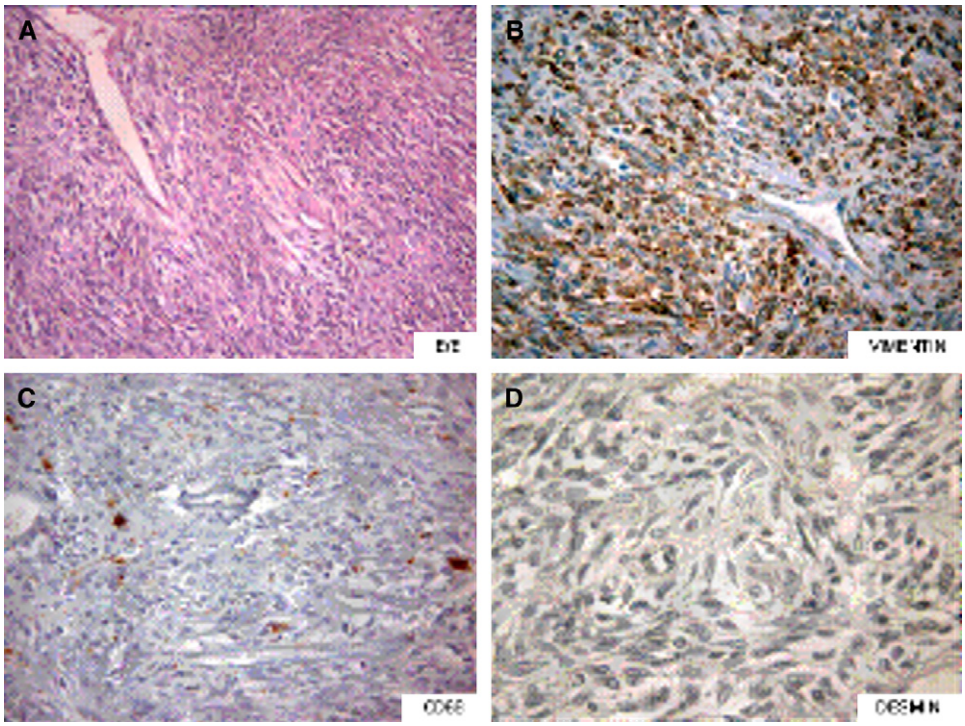

Fig 2. Histopathologic examination shows a pleomorphic tumor composed of fibroblasts, myofibroblasts, and histiocyte-like cells arranged in a storiform pattern (*A*, stain: hematoxylin and eosin; original magnification, × 150). The tumor cells are diffusely positive for vimentin and CD68 but negative for desmin. (*B*, stain: vimentin; original magnification, × 150; *C*, stain: CD68; original magnification, × 150; *D*, stain: desmin; original magnification, × 250.)

chemotherapy for 6 months. At 3 years follow-up, the patient showed no signs of recurrence.

DISCUSSION

Malignant fibrous histiocytoma is a soft tissue neoplasm, arising from primitive mesenchymal cells demonstrating both histiocytic and fibroblastic differentiation. It represents the most common soft tissue sarcoma of the middle and late adulthood.[1] The most common sites involved are the lower (50%) and upper (25%) extremities followed by the retroperitoneum (15%). Five histologic MFH subtypes have been described: pleomorphic storiform (65%), myxoid (15%), giant cell (10%), inflammatory (8%), and angiomatoid (2%). Malignant fibrous histiocytoma is an aggressive sarcoma; tumor location, size, and histologic grade directly influence prognosis. Five-year survival for tumors <5 cm is 82%. This figure falls to 68% for 5- to 10-cm tumors, and 51% for tumors >10 cm. Metastases occur most commonly to the lungs (90%), lymph nodes (12%), bone (8%), and liver (1%).[2,3] Although MFH may arise from the supporting structures of various organs, the greater omentum is an extremely rare primary localization. The greater omentum covers a large area of the abdominal cavity, and omental tumors may occur in any part of the abdomen and mimic tumors of any tissue or organ. These tumors may reach large dimensions within the compliant abdominal cavity. Pre-operative imaging workup does not yield a confident preoperative diagnosis of primary omental tumors, but does facilitate the elimination of other potential primary tumors, which may be responsible for omental metastases. For this same reason, upper GI endoscopy and colonoscopy are mandatory to eliminate a digestive cancer metastatic to the greater omentum. Although patients with primary tumors located in the greater omentum may be asymptomatic, abdominal discomfort (as in the present case), nausea, weight loss, and a palpable abdominal mass are common. Operative exploration may be necessary to provide a definitive diagnosis.

REFERENCES

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