Metastatic tumors to the stomach: Clinical and endoscopic features

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INTRODUCTION
The stomach is an unusual site for metastasis. There have been several published reports on metastatic lesions in the stomach. However, information on gastric duodenal metastases is generally limited to single case reports. The present study examined the clinopathological features in a large series of patients with metastatic tumors in the stomach from distant sites.

MATERIALS AND METHODS
We conducted a chart review of patients with metastatic tumors of the stomach detected endoscopically from January 1990 to December 2003. Patients with malignant lymphoma involving the stomach, or with direct invasion from neighboring organs, were excluded from this study.

RESULTS
The present study included 64 patients, 36 men and 28 women, with a mean age of 56 years (28-82 years). The common indications for endoscopy were anemia, bleeding and epigastric pain. Metastases presented as solitary (62.5%) or multiple (37.5%) and were mainly located in the middle or upper third of the stomach. The main primary metastatic tumors were from breast and lung cancer and malignant melanoma.

CONCLUSION: As the prognosis of cancer patients has been improving gradually, gastrointestinal (GI) metastases will be encountered more often. Endoscopic examinations should be conducted carefully in patients with malignancies, and endoscopic biopsies and information on the patient’s clinical history are useful for correct diagnosis of gastric metastases.

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35% of the multiple lesions were located on the greater curvature (Table 1).

The diagnosis of metastatic tumors was confirmed pathologically by endoscopic biopsies in 59 out of 64 cases (92.2%). The remaining 5 cases were diagnosed during surgery for uncontrollable bleeding from the tumor. The primary sites of metastases are shown in Table 2.

The average time interval between the diagnosis of primary tumors and the diagnosis of metastatic lesions was 25.7 mo (1-40 mo), and varied the site of primary tumor (Table 3).

**DISCUSSION**

The stomach is an unusual site for metastasis\(^{[1-8]}\). As the prognosis of cancer patients has been improving gradually, gastric metastases are encountered more frequently. In this series, lung, breast, and esophagus were the common primary metastatic sites, and malignant melanoma was associated with the highest rate of metastases. More than half of the metastatic tumors were found within a year of the diagnosis of a primary tumor. In particular, most of the gastric metastases from esophageal and lung cancer were detected within a year, since these cancers progress rapidly. On the other hand, breast cancer extended slowly, and it was sometimes more than three years before gastric metastases were diagnosed after the initial diagnosis of the primary tumor. It was noteworthy that metastatic tumors were detected before diagnosis of the primary tumors in 2 patients\(^{[8,9]}\). Symptoms of metastatic tumors including pain, nausea, vomiting, and signs of bleeding are nonspecific\(^{[4-9]}\). Endoscopy may be useful in the diagnosis and local treatment of gastric metastases, such as endotherapy that was performed successfully in 5 out of 10 patients with active gastrointestinal (GI) bleeding (endoscopic clipping in 4 cases and adrenaline injection in 1 case). In our series, more frequent endoscopic patterns included multiple nodules, bull’s eye, extrinsic mass lesions, ulceration and polypoid tumor mass as previously reported\(^{[4-8,10-13]}\). Solitary metastases were more common than multiple metastases. The solitary lesions were mainly located in the middle third (40%) or the upper third (40%) of the stomach, and the proportion of the solitary lesions was similar to that of the multiple lesions. Forty percent of the solitary lesions and 35% of the multiple lesions were located on the greater curvature. About 90% of the metastatic lesions could be confirmed histologically by endoscopic biopsies. Tumor-negative biopsies may be mainly due to extrinsic mass rather than due to sampling error. It should be emphasized that the endoscopist should provide the pathologist with sufficient information about the patient’s history to allow an accurate pathological diagnosis.

In conclusion, as the prognosis of cancer patients has been improving gradually, GI metastases will be encountered more often. Endoscopic examinations should be conducted carefully in patients with malignancies, and endoscopic biopsies and information on the patient’s clinical history is useful for the correct diagnosis of gastric metastasis.

**COMMENT**

1. **Backgrounds**
The stomach is an unusual site for metastasis. There have been several published reports on metastatic lesion in the stomach and information on gastric duodenal metastases is generally limited to single case reports. The present study examined the endoscopic and clinopathological features in a large series of patients with metastatic tumors to the stomach.

2. **Research frontiers**
As the prognosis for cancer patients has been improving gradually, GI metastases will be encountered more often.

3. **Innovations and breakthroughs**
Metastasis to stomach is rare, hence no large series has been published so far. The current study is an improvement in terms of numbers of cases. It reemphasises the same results which have been published earlier.
4. Applications
Endoscopic examinations should be conducted carefully in patients with malignancies, and endoscopic biopsies and information on the patient's clinical history is useful for correct diagnosis of gastric metastasis.

5. Terminology
Metastatic tumors to the stomach.

6. Peer review
The current paper gives retrospective analysis of data on metastatic tumors to stomach over a period of 15 years at author’s center. Metastasis to stomach is rare, hence no large series has been published so far. Oda et al have published a series of 54 cases of metastatic tumors to stomach in 2001. The current study is slight improvement in terms of numbers of cases. Authors have reported in the current article that 19 cases underwent endoscopy due to bleeding and 5 cases were diagnosed with metastatic tumors at time of surgery due to uncontrolled bleeding.

REFERENCES

S- Editor Liu Y  L- Editor Wang XL  E- Editor Bai SH

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