Primary Gastric Lymphoma with Unusual Imaging Presentation: case report

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The stomach is the most common site of gastrointestinal lymphoma. Nodules, thickened gastric folds, and polypoid lesions with or without ulceration are common imaging findings. We present a case of primary diffuse large B-cell lymphoma of the stomach that had the unusual appearance of a large exophytic mass with central necrosis and direct invasion to the liver.

Gastrointestinal (GI) lymphomas typically present with nonspecific symptoms and signs. GI lymphomas are rare, and it is important to diagnose them correctly since their management and prognosis are distinctly different from those of other malignancies of the GI tract. On endoscopy, gastric lymphoma may appear to be infiltrative with thickened gastric folds. It may be polypoid, ulcerated, nodular, or combination any of these conditions [1]. We present a patient with a gastric lymphoma that had an unusual appearance.

CASE REPORT

A 60-year-old man presented with two months of intermittent needle-like pain in the right upper quadrant, melena, and weight loss of about 10 kg. He denied any previous illness. On presentation, he was febrile with leukocytosis. Contrast-enhanced CT scan of upper abdominal was performed, which revealed an $11 \times 10.5 \times 11.2$ cm heterogeneous low density air containing lesion in the left lobe of the liver (Fig. 1a). Left hepatic artery passing through the large low density mass lesion was also noted (Fig. 1b). There was thickening of the wall of the gastric antrum (Fig. 2). No regional or retroperitoneal paraaortic lymphadenopathy was founded. The patient underwent endoscopy and an upper GI series (Fig. 3) which showed a large eccentric mass with a central ulcer arising from the lesser curvature of the gastric antrum. The remaining mucosa was soft with smooth rugae. There was no proximal dilation nor evidence of obstruction.

Endoscopic biopsy of the stomach tumor and echo-guided biopsy of the hepatic lesion were then performed. Both the stomach and the liver tissue specimens had aggregates of large round cells in the lamina propria. Immunohistochemically, the cells of both sites were both positive for CD20 and CD79a. The pathological diagnosis was a diffuse large B-cell lymphoma of the stomach with hepatic invasion.
The patient was given a full course of chemotherapy, after which a repeated contrast-enhanced CT scan of abdomen revealed a much smaller low density lesion in the left lobe of liver than that previously found. There was marked shrinkage of the left lobe of the liver (Fig. 4), and the antral wall was much less thick as compared with the initial CT scan (Fig. 5).

DISCUSSION

In our case, the differential diagnosis based on the findings of initial CT scan includes: (1) gastric gastrointestinal stroma tumor (GIST) with direct invasion of the left lobe of the liver, (2) a gas-containing pyogenic liver abscess extending to the stomach, (3) malignant hepatic tumor with a coex-
isting abscess and direct invasion into the stomach, and (4) primary gastric lymphoma with direct liver invasion presenting atypically.

GISTs classically appear on barium study as a smooth, discrete, submucosal mass [2], although ulceration and fistulae are common features [3]. On contrast-enhanced CT scan, GISTs are typically large, exophytic heterogeneous hypervascular masses, with metastases generally involving the liver and the peritoneum [3]. Our patient’s lesion therefore had many imaging features consistent with GIST. Thus a biopsy was necessary to achieve definitive diagnosis.

Fever and leukocytosis in combination of a gas-containing liver mass raised the possibility of a liver abscess in our patient. However, the air pattern within the hepatic lesion was branching, and there was no sign of the air–fluid level which would normally be expected in a gas–forming pyogenic abscess. The air pattern in our case was more suggestive of a fistula between a liver abscess and the GI tract. While rupture into the bowel is an extremely rare complication of liver abscesses, when it does occur, it not unusually involves the left lobe of the liver [4]. Since that’s where our patient’s liver lesion was located, this possibility could not be discounted by the imaging studies alone.

The imaging features of hepatoma and liver metastases may be quite similar to that of a liver abscess. In a case of hepatoma with tumor necrosis, bacterial infection of the necrotic tissue may mimic a benign liver abscess [5]. A possible distinguishing feature here is that hepatoma rarely directly involves the GI tract [6]. The diagnosis of liver tumor therefore would not easily have explained our patient’s gastric mass.

Gastric lymphoma usually appears as focal or diffuse wall thickening or nodulation on CT and UGI studies. In contrast to gastric adenocarcinoma, lymphoma usually involves more than one area of the stomach and rarely causes gastric outlet obstruction [7]. Our case is a large exophytic mass lesion with central necrosis arising from the antrum of the stomach and directly invades to the left lobe of liver. It is indeed an unusual image presentation of gastric lymphoma.

**CONCLUSION**

The increasing resolution and sophistication of the imaging techniques make it tempting to think that diagnoses can confidently be made based on imaging alone.

The unusual imaging findings in this case of gastric lymphoma remind us that tissue diagnosis remains necessary.
REFERENCES

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原發性胃淋巴癌的特殊影像學表現：病例報告

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胃是胃腸道淋巴癌最常發的地方。結節狀的凸起，變厚的胃皺摺或息肉般的病灶伴隨著潰瘍的有或無是常見的影像學表現。我們的病例報告是一個瀰漫型大B細胞淋巴癌的患者，其一開始的影像學呈現是個不尋常的巨大向外凸出型病灶伴隨著中央的壞死區域和直接的肝臟侵犯。