Metastatic duodenojejunal carcinoma from ovarian primary

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Summary

A 55-year-old woman presented with symptoms of progressive sub-acute high gastrointestinal obstruction. Barium studies, upper gastrointestinal endoscopy, ultrasound and ERCP were normal. Diagnosis was therefore delayed. At laparotomy, malignant tumours were found at the duodenojejunal flexure and left ovary, which were histologically identical and consistent with an ovarian primary. Endoscopic techniques for visualization of the third and fourth parts of the duodenum should be employed after barium studies, including careful screening in this area, have failed to reveal pathology.

Introduction

Primary or secondary malignant disease of the duodenum is encountered rarely, but nonetheless comprises 0.35% of all gastrointestinal tumours (Lillemoe and Imbembo, 1980). Moreover, more than 55% of these tumours have been reported distal to the ampulla (Spira, Ghazi and Woolff, 1977). The main diagnostic techniques for visualizing the third and fourth parts of the duodenum was by barium studies (Lillemoe and Imbembo, 1980), and by fibroptic endoscopy (Spira *et al.*, 1977; Wald and Milligan, 1975). Due to the infrequency with which such tumours occur, diagnosis may be delayed. We report a case of secondary ovarian neoplasm arising at the duodenojejunal flexure where diagnosis was only made at laparotomy.

Case report

A 55-year-old retired clerical worker presented with a 2-month history of vomiting 3-4 times daily, which was unrelated to meals. She had lost one stone in weight since the onset of her illness, but there had

been no abdominal pain, jaundice or fever. General examination was unremarkable. Routine biochemical and haematological investigations were normal. The following were also normal: plain abdominal X-rays; barium meal and follow-through; ultrasound of liver and pancreas; endoscopic retrograde cholangiopancreatography (ERCP) of pancreatic and common bile ducts; and endoscopic examination of the stomach and first part of the duodenum. She was treated with metoclopramide and returned home. Three weeks later she reported that vomiting had ceased with this medication and a liquid diet. After 2 more weeks she was readmitted with an exacerbation of her symptoms and further weight loss. On examination, bowel sounds were exaggerated and a succussion splash was elicited. Abdominal X-rays revealed two fluid levels in the epigastrium and a nasogastric tube drained 3.5 litres over the 12 hr following admission. Upper small bowel obstruction was diagnosed.

At laparotomy, there was a 3 cm tight stenosis at the duodenojejunal flexure infiltrating the ligament of Treitz, which had the appearance of a malignant neoplasm. There was also a hard mass replacing the left ovary. The liver was normal and there were no nodes at the origin of the superior mesenteric artery. The duodenojejunal flexure was resected and end-to-end anastomosis carried out; the left tube and ovary were excised.

The resected duodenojejunal flexure showed a moderately differentiated mucin-secreting adenocarcinoma. Tumour was present throughout the wall and in the mesentery. Within the mucosa, the villous architecture was replaced in a manner which made it difficult to distinguish between a primary carcinoma and secondary invasion. The ovary was replaced by a histologically identical tumour which had breached the capsule. The PB/KOH/PAS stain (Culling *et al.*, 1975), an indicator of intestinal mucins, suggested that the tumours were not of primary bowel origin.

She was subsequently treated with chemotherapy and remains well at 6 month follow-up.

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Discussion

We feel that this case warranted attention for two reasons: first, to our knowledge, this is the only recorded case of an ovarian malignancy metastasizing to the duodenojejunal flexure, and second, since duodenal tumours are relatively rare, pathology distal to the ampulla may escape consideration.

In a study of 17 patients with duodenal malignancy Lillemoe and Imbembo (1980) confirmed the presence of tumours in 13 patients by barium studies, and fiberoptic duodenoscopy was successful in diagnosing the remainder. The fiberoptic technique has other protagonists (Spira *et al.*, 1977; Wald and Milligan, 1975).

The following have been recorded as presenting symptoms: postprandial and constant abdominal pain; gastrointestinal bleeding; jaundice; abdominal mass; weight loss; and nausea and vomiting. Although our patient had only these last three, the symptoms were severe and unremitting for more than two months. The diagnosis was, however, missed on barium studies and upper gastrointestinal endoscopy. With earlier diagnosis, she might have been spared considerable morbidity, and although the outlook for ovarian tumours is still poor, despite the proliferation of chemotherapeutic agents, there is evidence that early debulking of tumours followed by chemotherapy increases survival times (Editorial, 1979).

It is our contention that, in view of the operative

findings, it seems unlikely that barium flow was adequately screened as far as the lesion in spite of a request for a follow-through. It is apparent that routine upper gastrointestinal barium studies should include screening as far the upper jejunum to exclude pathology in the third and fourth parts of the duodenum. If this simple method fails to reveal any lesion in the face of persistent symptoms, fiberoptic instruments and expertise for visualizing the duodenojejunal flexure should be available.

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