CASE REPORT

Heterotopic Pancreas in the Stomach

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Summary

A patient diagnosed with gastrointestinal stromal tumour of the stomach underwent gastrectomy. Post-operatively, histopathology was reported as heterotopic pancreas of the stomach. Heterotopic pancreas is very rare and though most of them appear asymptomatic, surgical resection is advisable.

Key Words: Heterotopic pancreas, Stomach

Introduction

Heterotopic pancreas is defined as aberrant pancreatic tissue lacking vascular or anatomical continuity with normal pancreas[1,2]. The incidence ranges from 0.55% to 13.7%[1,2,3]. Heterotopic pancreas is usually asymptomatic but may develop complications. We present a patient with gastric heterotopic pancreas, who we believe is the first case to be reported in a Malaysian journal. The features and management of gastric heterotopic pancreas are discussed.

Case Report

A 49-year-old Chinese man presented with abdominal pain of two months. He had loss of weight and appetite. His brother and father had carcinoma of the colon. Physical examination was normal. Gastroscopy revealed a vague lesion at the lesser curve, which appeared as a submucosal tumour but the mucosa itself was normal. Computed tomography confirmed a large lesion involving the lesser curve and posterior stomach wall. (Figure 1). Biopsies taken were reported as normal gastric mucosa. Endoscopic ultrasonography revealed a large submucosal tumour, measuring 5cm x 6cm, involving the muscularis propria. There were no lymph nodes. Our provisional diagnosis was a gastrointestinal stromal tumour of the stomach and the patient underwent laparotomy.

Intraoperatively, the findings were similar to the CT scan report, except there were adhesions of the tumour to the left lobe of the liver and there were multiple perigastric lymph nodes. The tumour involved almost the entire length of the lesser curve of the stomach. The omentum was adherent to the tumour. A frozen section was performed which was suspicious of heterotopic pancreas. Since we suspected malignant transformation, total gastrectomy and roux-en-y oesophagojejunostomy was performed. All perigastric lymph nodes and lymph nodes along the left gastric artery and coeliac trunk were excised. Cut section of the stomach revealed a large tumour with normal mucosa but the center of the lesion was excavating. Figure 2.

Histopathology was reported as pancreatic heterotopia, with the tumour involving the submucosa and muscularis propria. All lymph nodes were free of tumour. A gastrograffin swallow was performed 10 days after the surgery, which revealed no anastomotic leak, and the patient was allowed orally and discharged home.

He was seen in the clinic 2 months later. He was well, with no more pain. As expected, he complained of satiety and was unable to eat large meals. He was maintaining his weight and was there was no dumping.

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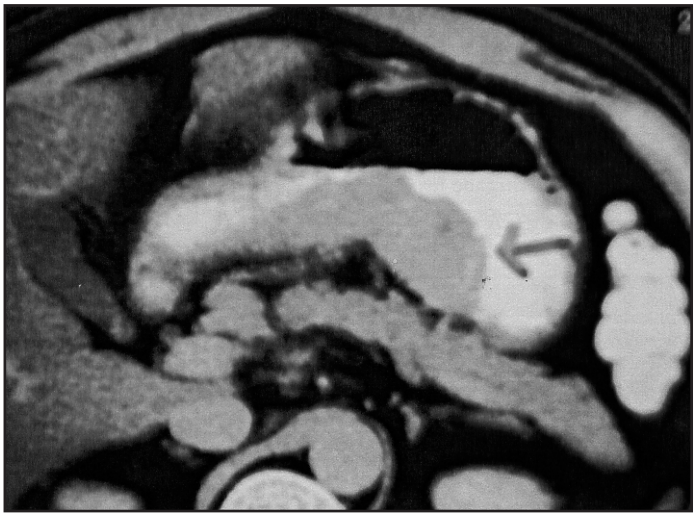

Fig. 1: A large submucosal tumour along the lesser curve and posterior wall of the stomach.

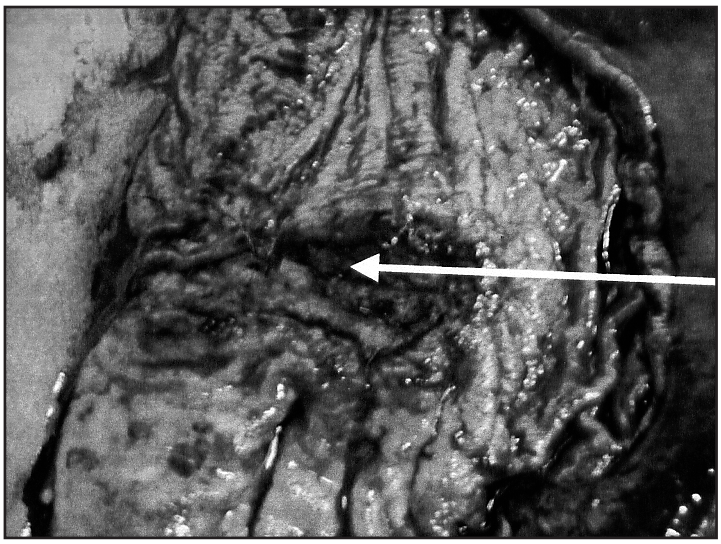

Fig. 2: The stomach cut open, showing a large excavating lesion with normal overlying mucosa.

Discussion

Heterotopic pancreas is difficult to diagnose preoperatively[1,2,3], as demonstrated in this patient. The two histogenetic theories are fetal migration of pancreatic cells and penetration of immature gastric mucosa into the submucosa followed by differentiation into pancreatic tissue. The most common location of this aberrant pancreatic tissue is the stomach, duodenum and jejenum[1,2,3] but there have been reports of localization in the oesophagus, skin and biliary tree. It is located in the submucosal plane and functions as normal pancreas does. They may present with pyloric obstruction, ulceration and bleeding[1,2].

Endoscopic features are a well-defined dome shaped nodule, usually less than 3cm, in the gastric antrum, with central umbilication [2,3], which was not featured in our patient. Endoscopy, sonogram and computed tomogram may help in diagnosis but only histology is definitive[2]. Endoscopic ultrasonogram is helpful as it delineates the extent of the lesion and a submucosal needle biopsy may be performed. Histologic features of heterotopic pancreas are presence of pancreatic acinar, ductal and islets cells in the gastric submucosa, which was present in our patient. Per operative frozen section is beneficial[2] as it can confirm the diagnosis and exclude malignancy, which will help to decide extent of resection. Heterotopic pancreas is subject to similar complications as normal pancreas. Malignant degeneration is controversial but adenocarcinomas, gastrinomas and insulinomas have been reported[1,2,3].

Treatment is debatable[3] but most recommend surgery [1,2,3] because of potential complications including malignant degeneration. Local excision[2,3] is sufficient unless malignant transformation has occurred. Unfortunately, though the frozen section in this case was suggestive of heterotopic pancreas, due to the gross features suggestive of malignancy and the large lesion involving almost the entire lesser curve, we performed a very radical resection, which we now feel was an'overkill'.

In conclusion, heterotopic pancreas may confound the surgeon who is unaware of its potential. Investigatory tools may aid in diagnosis but preoperative diagnosis is difficult. Resection is advisable as malignant degeneration is a possibility. A limited resection is sufficient unless malignant transformation has occurred.

References

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