JBR–BTR, 2011, 94: 295-296.

ECTOPIC GASTRIC PANCREATITIS: UNUSUAL CAUSE OF EPIGASTRIC PAIN

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Ectopic pancreatic tissue has the same characteristics than normal pancreatic tissue. Therefore it may be affected by the same diseases. We report a rare cause of epigastric pain due to gastric heterotopic pancreatitis. The rare diagnosis was suspected by ultrasound and CT and definitively confirmed by echo-endoscopic guided biopsies.

Key-word: Pancreas, abnormalities.

Heterotopic pancreas in the stomach is an uncommon entity. The lesions are small and often asymptomatic, resulting in an incidental finding during autopsy or in CT-imaging for other pathology. This pancreatic tissue can have all the normal characteristics of pancreatic tissue, therefore the same complications as in normal pancreas tissue can occur.

Case report

A 29-year old female presented to the department of gastroenterology with a six months history of continuous abdominal pain. The pain, unrelated to food-intake, had markedly increased during the last days and was now radiating to the back. A mild epigastric pain was found at physical examination. Laboratory tests were normal except a slight raise of C-reactive protein level at 124 mg/l.

Abdominal Ultrasound revealed an anterior submucosal antral gastric mass (Fig. 1) which was confirmed by CT (Fig. 2, 3). At this time the differential diagnosis included GIST tumor, lymphoma, lymphangioma and ectopic pancreatic tissue.

After echo-endoscopic examination with multiple biopsies pathological examination revealed ductal and acinary structures with inflammatory infiltration of eosinophilic polynuclear and mononuclear cells. The definite pathological diagnosis consisted of gastric ectopic pancreatitis.

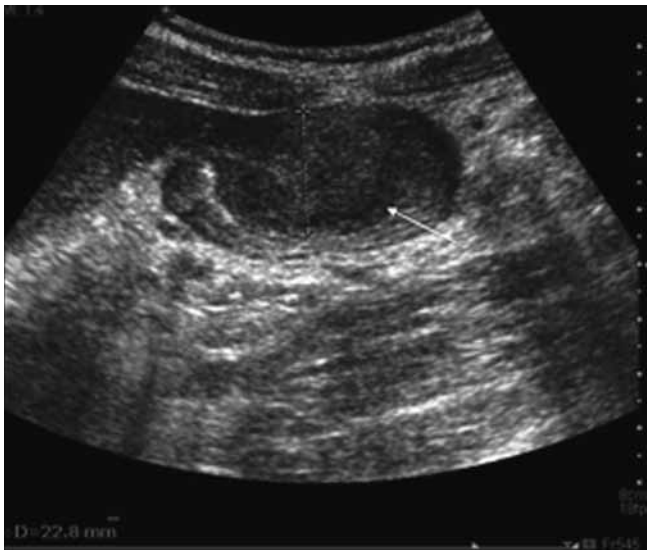

Fig. 1. — Hypo-echogenic mass located in the stomach (arrow)

Discussion

Heterotopic pancreas tissue can occur in the stomach, duodenum or upper part of the jejunum. Less frequent locations are the ileum, bile duct, spleen and even a Meckel diverticulum (1). Heterotopic pancreas is defined as pancreatic tissue lacking vascular continuity with the normal pancreatic body. Histologically however, ectopic pancreas completely resembles normal pancreas tissue, and contains pancreatic acini, islets of Langerhans and pancreatic ducts. The incidence in autopsy is very high, however heterotopic pancreatic tissue is less frequently found during life. These lesions are very small and often only an incidental finding on surgery or autopsy (2). The appearance in the stomach consists mostly of a firm yellow, finely lobulated nodule, usually submucosally located and sometimes extending in the muscularis and the serosa (3). The most frequent location of ectopic tissue is along the great curvature of the stomach and in the gastric antrum within 6 cm of the pyloric canal (4). The best imaging method is a helical CT imaging with negative oral contrast.

Ectopic pancreatic tissue has a similar manifestation like other submucosal gastric tumors such as a gastrointestinal stromal tumor (GIST) and leiomyomata. These are the most common gastrointestinal submucosal tumors. There are a few features that can be used for the differentiation of these tumors on a CT (5). Ectopic pancreatic tissue can be divided into three subtypes depending on the histopathological composition (1) predominantly containing pancreatic acini (3), predominantly containing ducts and (3) a mixed type. In one study, ectopic tissue with predominantly acini showed a more homogenous enhancement pattern when compared to tissue with a mixed histological composition (5). There are five major CT characteristics, which allow differentiation of ectopic pancreatic tissue from a GIST or a leiomyoma. The most important differential is the LD (long diameter)/SD (short diameter) ratio which has to be greater than 1,4. Ectopic pancreatic tissue is not a true

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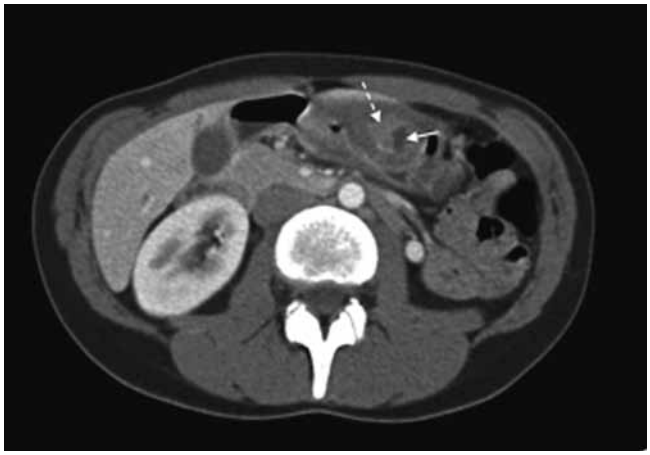

Fig. 2. — Mass in the antrum/corpus of the stomach (striped arrow) with a LD/SD ratio > 1,5 and a cystic mass in the center of the mass (arrow).

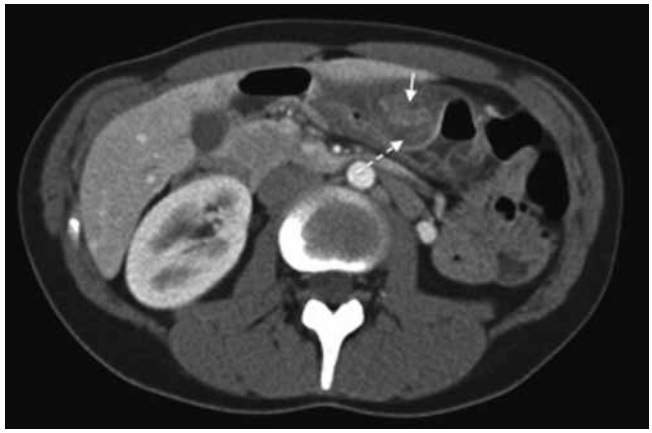

Fig. 3. — The same mass (arrow) in the antrum/corpus of the stomach with submucosal edema (striped arrow).

neoplasm but is a hamartoma of flat glandular tissue thereby resulting in a more flattened ovoid shape and a higher LD/SD ratio in comparison to a GIST (5). Only after intraglandular cyst formation, an ectopic pancreas can manifest as a large protruding submucosal mass. Furthermore a GIST tends to be more exophytic in growth in comparison to ectopic tissue which tends to have a more endoluminal growth (6). The degree and the pattern of contrast enhancement reflects the microscopic composition as described above. Leiomyomas show a homogenous enhancement pattern and are predominantly located in the cardia. Ectopic pancreas tissue is predominantly localized in the antrum, pylorus or duodenum (7). A prominent enhancement of the overlying mucosa can be seen exclusively in patients with ectopic pancreas tissue (8).

MRCP can also have a diagnostic role in detecting ectopic pancreas tissue by demonstrating an ectopic duct arising from a mesenteric or small bowel mass (9).

In most cases heterotopic pancreatic tissue is of no clinical importance, but sometimes complications can occur. A pancreatitis with possible formation of pseudocysts can arise or an adenoma/ insulinoma can be formed. Malignant transformations have only rarely been reported (10). In our patient we could definitely depict the mass located in the stomach, which showed an inflammatory change compatible with pancreatitis.

Conclusion

Ectopic pancreas has an estimated incidence of 0.55 to 14% according to autopsy studies. Although this heterotopic tissue seldom causes clinical symptoms, ectopic pancreatitis of the stomach has been described. On CT-imaging a submucosal mass can be depicted and the differential diagnosis between a stromal tumor and ectopic pancreatitis can be made using criteria LD/SD ratio and localization. This ectopic tissue has the same characteristics as normal pancreatic tissue, therefore the same complications can occur. In our patient the heterotopic tissue inflamed, making its diagnosis much easier.

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