Ectopic pancreatic tissue located in the subserosa of the jejunum: a case report

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Abstract

Introduction
Ectopic pancreas is defined as a pancreatic tissue in an abnormal location with no ductal, anatomical, neuronal or vascular communication with the main body of the pancreas. The incidence of heterotopic pancreas in autopsy studies is approximately 0.6%–15%, while the clinical incidence is 1 in 500 laparotomies. Ectopic pancreatic tissue can be present anywhere along the gastrointestinal tract. This paper discusses a case of ectopic pancreatic tissue located in the subserosa of the jejunum.

Case report
We present the case of a 53-year-old woman where a sigmoid resection was performed for chronic, symptomatic diverticular disease was performed and incidentally, a 2 × 3 cm tumour was found in the jejunum. The histological study reported a subserosal heterotopic pancreatic tumour. The patient post-operatively remained asymptomatic and was dismissed on the 6th post-operative day.

Conclusion
In 75% of the cases, the ectopic pancreatic tissue is located in the submucosa. However, around 13% of these tumours will be found to be in the subserosa. This case is of great interest because of the subserosal location of the tumour.

Introduction
Ectopic pancreas is defined as a pancreatic tissue in an abnormal location with no ductal, anatomical, neuronal, vascular communication with the main body of the pancreas. The incidence of heterotopic pancreas in autopsy studies is approximately 0.55%–13.7% and as low as 0.2% in laparotomies³–⁵.

The ectopic pancreatic tissue can be present anywhere along the gastrointestinal tract¹¹–¹³. Most frequently, it is located in the stomach, the duodenum, the proximal jejunum or the Meckel’s diverticulum⁶–⁷. Rarely, it is seen in the ileum, the gallbladder, the bile ducts, the splenic hilum, the umbilicus and the liver¹⁰–¹². The present report describes a rare case where the ectopic pancreatic tissue was located in the jejunum as a subserosal tumour.

Case report
A 53-year-old woman presented in our hospital for an elective sigmoidectomy due to chronic diverticulitis. The physical examination did not reveal any abnormal findings. Laboratory exams were normal [WBC of 8.4 × 10³/μL (reference range: 5–10 × 10³/μL), neutrophils of 62% (reference range: 40–80%), a C-reactive protein equal to 2.6 mg/L (reference range: <5 mg/L), ESR equal to 24 mm/h [reference range: 20–30 mm/h]]. As well, all other laboratory values, including amylase and lipase, were within the reference limits. The preoperative ultrasonography study of the abdomen, the endoscopic examination via colonoscopy, as well as the abdominal CT examination (with intravenous contrast) did not detect presence of any intra-abdominal tumour.

Intraoperatively, the chronic inflamed diverticulae of the sigmoid were recognized and the sigmoidectomy was performed without complications. After the sigmoid resection, we proceeded with a macroscopic examination of the small bowel. Incidentally, at the distal jejunum, a 2 × 3 cm yellow-white nodule was recognised. The nodule was located in the subserosa of the jejunum and was excised. The site of incision was repaired with sutures. The patient remained asymptomatic and without complications post-operatively, with normal lab values, and was discharged on the fifth post-operative day.

The pathology report of the nodule normal jejunal mucosa confirmed the presence of ectopic pancreatic tissue with glandular acini within the muscularis propria and subserosa of jejunum (Figures 1–3).
ectopic pancreatic tissue in stomach and duodenum is a derivative of the dorsal pancreatic bud, while that in jejunum and ileum originates from the ventral one.\textsuperscript{13,16–18} Histologically, most of the tumours are situated in the submucosa, rarely in the muscularis propria, and only seldom (around 13.5%) in the subserosa.\textsuperscript{12}

In spite of the advances in imaging and other diagnostic tools, a preoperative diagnosis is often difficult.\textsuperscript{2,16} Apart from thorough clinical exam, upper GI endoscopy, abdominal ultrasound and/or CT scan may be required to exclude other pathologies with similar features. However, in cases of ectopic pancreatic tissue findings are not specific.\textsuperscript{13,16,18,19} A treatment is required only in symptomatic patients, and in most cases it consists of simple surgical resection. The type and extent of the resection depends on the location and the size of the lesion.\textsuperscript{13,16}

**Conclusion**

The preoperative diagnosis of an ectopic pancreatic tissue along the gastrointestinal tract may be difficult, due to the non-specific imaging findings. The clinical symptoms, if present, may mimic other pathologies of the gastrointestinal tract. Despite the fact that heterotopia of the pancreas remains rare, it should be considered in the differential diagnosis of unspecific abdominal pain and intramural gastrointestinal obstruction. Considering the intramural location, most of the findings are located in the submucosa (75%), with only 13.5% of them located in the subserosa.

**Consent**

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

**References**

1. Armstrong CP, King PM, Dixon JM, Macleod IB. The clinical significance of referring to an inappropriate expression of pluripotent embryonic mesenchymal tissue of the gastrointestinal tract, leading to pancreatic metaplasia.\textsuperscript{13,15,16} It is commonly thought that

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**Figure 1:** (×100) Pancreatic acinar tissue in the jejunum wall.

**Figure 2:** (×25) Pancreatic acinar tissue in the jejunum wall.
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Figure 3: (×25) Normal jejunal mucosa with underlying heterotopic pancreatic tissue.