CASE REPORT

Heterotopic Subserosal Pancreatic Tissue in Jejunum-An Incidental Rare Finding

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Abstract:

Heterotopic pancreas is typically an asymptomatic malformation that can present anywhere along the gastrointestinal tract. It is frequently detected incidentally on surgery for other diseases or autopsy. We encountered incidentally detected subserosal nodule in proximal jejunum during exploratory laparotomy for other cause which was resected and on histopathology confirmed to be HP. Histologically, most of the tumours are located in the submucosa, rarely in the muscularis propria, and only seldom in the subserosal. This case is of great interest because of the subserosal location of the tumour.

Keywords: Heterotopic Pancreas, Subserosal, Jejunum, Computed Tomography

Introduction

Pancreatic heterotopic tissue often develops in the region other than normal location of pancreas without having any anatomic or vascular continuity to normal pancreas [1]. The term heterotopic pancreas was first coined by de Castro *et al.* [2] and reported point prevalence ranges from 0.55% to 13.7% [3] and as low as 0.2% during laparotomies [4]. Heterotopic Pancreas (HP) of small intestine are often asymptomatic and diagnosed only incidentally during laparotomy for any other cause, symptoms are only produced when they are sufficiently enlarge to produce obstruction due to bowel intussusceptions or inflammation leading to pancreatitis or bleeding resulting in melena [1]. Most frequently, it is located in the stomach, the duodenum, the proximal jejunum or the Meckel's diverticulum [5-6]. Macroscopically majority of HP tissue present as sub mucosal nodule or lobulated mass but also can manifest as a subserosal nodule [7-8]. To the best of my search, only one case [9] reporting subserosal pancreatic tissue in jejunum found in English literature till date. The present report describes a rare case where the ectopic pancreatic tissue was located in the jejunum as a subserosal tumour.

Case Report:

A 65-year-old woman presented in our hospital with pain in abdomen, fever off and on and vomiting after eating, since 10 days .On physical examination, tenderness in epigastrium was the only finding. Laboratory exams showed elevated White Blood Cell (WBC) count 14.6 × 10^3/μL (reference range: 5–10 × 10^3/ μL), and raised Erythrocyte Sedimentation Rate (ESR) equal to 42 mm/h (reference range: 20–30 mm/h)]. Serum amylase (116U/L), serum lipase (138U/L) and serum calcium (10.1mg/dL) were within normal limits. On Contrast-enhanced Computed Tomography (CECT) there was collection in mesentery and thickening of small bowel wall with extraluminal gas. Patient was taken for exploratory laparotomy and there was mesenteric abscess present at root of mesentery. Abscess was drained and adhesinolysis was done. On further exploration, incidentally, at the proximal jejunum,

a 4×3 cm yellow-white nodule firm in consistency was recognized (Fig.1). 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 without complications post-operatively, with normal lab values, and was discharged on the tenth post-operative day. The pathology report of the nodule confirmed the presence of ectopic pancreatic tissue with glandular acini, ducts and absence of islet cells of langerhans within the muscularis propria and subserosa of jejunum (Fig.2 and Fig.3).

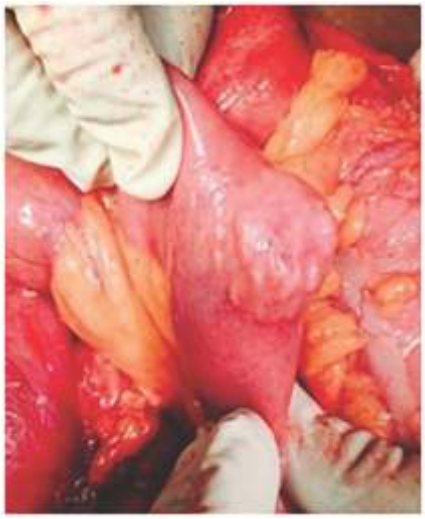

Fig. 1: Subserosal Tumour in Proximal Jejunum

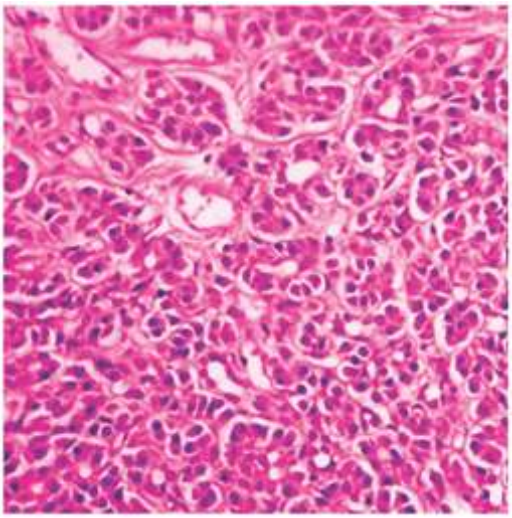

Fig. 2: Pancreatic Acinar Tissue in the Jejunum Wall

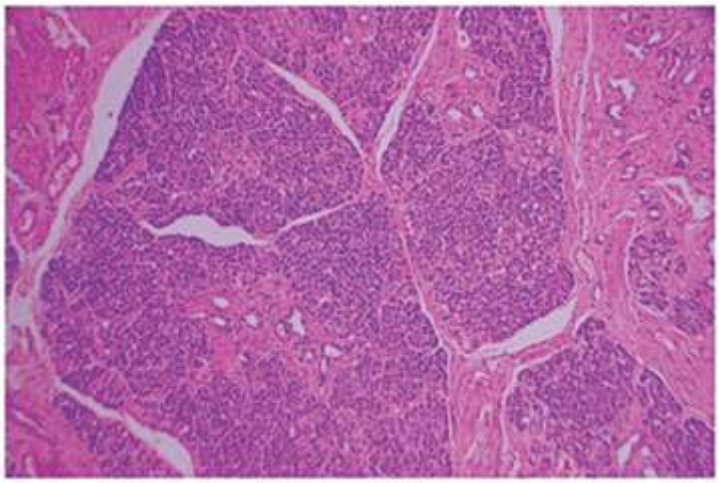

Fig. 3: Showing Acinar Lobule with Ducts within Muscularis Mucosa

Discussion:

HP tissue can be found anywhere from esophagus to rectum and lacks anatomical and vascular continuity with the main pancreatic body [1, 10]. The most common location of HP is duodenum (30.3%), followed by stomach (26.3%), jejunum (16.3%), ileum (5.8%) and Meckel's diverticulum (5.3%) suggesting that it occurs most frequently near the normal place of pancreato-genesis near the jejunum [1]. Histologically, most of the tumours are situated in the submucosa, rarely in the muscularis propria, and only seldom (around 13.5%) in the subserosal [9, 11]. These lesions are frequently asymptomatic but may become symptomatic because of complications such as pancreatitis, bowel intussusception, melena or malignant transformation [1, 12]. The probability of HP tissue to become symptomatic is directly related to size and mucosal relation of the lesion [1]. In a study reviewing 34 histologically proven cases concluded that lesions associated with signs and symptoms are >1.5 cm in maximum diameter and are adjacent to or directly involve the mucosa [13]. Histopathological examination is the most definitive tool to confirm diagnosis and classify lesion according to commonly accepted Heinrich's classification which is being as follows: Heinrich type I- contains ducts, acini, and islets. Heinrich type II- is composed of ducts and acini, lacking islets. Heinrich type III- consists of ducts and smooth muscle tissue only, lacking acini and islets [1, 14]. The present case was type 2 according to Heinrich classification. Though, the pre-operative diagnosis of HP in small intestine is difficult, there are studies suggesting the Computed Tomography (CT) findings for HP in stomach and duodenum, but these CT characteristics usually are non-specific and cannot differentiate HP from other submucosal lesion like Gastrointestinal Stromal Tumour (GIST) or carcinoid tumour [1]. Therefore, frozen sections should be taken rapidly and routinely so as to confirm the diagnosis and avoid unwanted radical surgery. However CT with arterial, portal and equilibrium phase contrast study can demonstrate lesion with similar enhancement to normal pancreas [7].

The management of HP is a controversial topic. There is no consensus on the management of asymptomatic and incidental lesions. As lesions are slow growing and chances of malignant transformation is extremely rare (0.7-1.8%) [14-15], prophylactic resection seems to be unnecessary [1, 16]. Ormarsson *et al*. [17] followed 32 patients with HP of the stomach or small bowel for 13 years and found that there was no malignant transformation in any of the patients over this time. Surgical resection of HP should be performed in symptomatic patients after more common causes of abdominal complaints such as peptic ulcer disease, gastro-esophageal reflux disease, and biliary disease have been ruled out [18]. In our case, jejunal HP was detected incidentally during exploratory laparotomy for other disease and the lesion was resected out of curiosity to identify the pathology.

Conclusion:

Although heterotopic pancreas is not uncommon, but we are reporting a rare case of subserosal jejunal HP incidentally found during laparotomy for other cause. In light of this incidental finding we conclude that despite of rarity of lesion it should be considered in differential diagnosis of any incidentally found subserosal /serosal nodule along the gastrointestinal tract.

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