Case Report

HETEROTOPIC PANCREAS IN APPENDIX: A RARE CASE REPORT

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ABSTRACT
Heterotopic pancreas is defined as the presence of pancreatic tissue in an abnormal location without any anatomical or vascular continuation with the main body of the pancreas. Most common locations are stomach, duodenum and jejunum. Rare cases have been documented in ileum, omentum, colon, gall bladder, cystic duct, spleen, liver, urinary bladder, lungs, fallopian tube, tongue and submandibular salivary gland. Heterotopic pancreatic tissue located in the appendix is a rare entity. A 65 year old male was operated for intestinal tuberculosis. Appendix attached to the caecum revealed heterotopic pancreatic tissue on histopathological examination. No case of pancreatic heterotopias in appendix has been reported so far to the best of our knowledge.

Keywords: Heterotopic, Pancreas, Appendix, Tuberculosis

INTRODUCTION
Heterotopic pancreatic tissue is usually an asymptomatic incidental finding. It represents pancreatic tissue outside normal pancreas occurring anywhere along the entire gastrointestinal tract. Most common locations are stomach, duodenum and jejunum. Rare cases have been documented in ileum, omentum, colon, gall bladder, cystic duct, spleen, liver, urinary bladder, lungs, fallopian tube, tongue and submandibular salivary gland. In this report, we present an incidental finding of heterotopic pancreatic tissue in appendix in a patient of subacute intestinal obstruction. Most cases are asymptomatic and are incidental findings (Christodoulidis et al., 2007; Eisenberger et al., 2004) but can present as nausea, vomiting, abdominal pain and weight loss and even malignancy though rarely. Resection is indicated only if associated with symptoms or preoperatively diagnosis is not certain (Tanaka et al., 1993). We found this case of pancreatic heterotopia worth reporting because of its rare incidence and to add on to the literature on heterotopic pancreas.

CASES

Figure 1: H&E; 200X, heterotopic pancreatic tissue in appendix
A 65 years old male presented with history of pain abdomen, non passage of stools and flatus and weight loss for one month. Clinical diagnosis of subacute intestinal obstruction was made. Laboratory findings were Hb - 12.5gm%, WBC - 13000 cells/cumm and radiological findings suggested the possibility of tuberculosis gut which was confirmed on histopathology. In addition, the appendix attached to the gut segment sent for histopathological examination revealed the presence of heterotopic pancreatic tissue.

DISCUSSION

Heterotopic pancreatic tissue is a developmental malformation that is characterised by development of pancreatic tissue outside the normal site of pancreas (Dolan et al., 1974). Moreover this aberrant pancreatic tissue does not have any anatomical and vascular continuity with normal pancreas. It is usually an asymptomatic incidental finding as is in our case report Various other terminologies used for heterotopic pancreas are aberrant pancreas, ectopic pancreas and accessorium sue supranumerale. Most common locations are stomach (27%), duodenum (26%) and jejunum (18%). Rare cases have been documented in ileum, omentum, colon, gall bladder, cystic duct, spleen, liver, urinary bladder, lungs, fallopian tube, tongue and submandibular salivary gland. Appendix is an uncommon site of heterotopic pancreas and our search of literature also did not yield any positive results. Two main theories that have been proposed are the misplacement theory and metaplastic theory. Misplacement theory states that separation of pancreatic tissue during the embryonic rotation of dorsal and ventral buds results in formation of aberrant pancreatic tissue anywhere along the entire gastrointestinal tract. According to metaplastic theory site of pancreatic metaplasia of endoderm which migrates to submucosa during embryogenesis gives rise to ectopic pancreatic tissue. Most cases are found incidentally and usually asymptomatic (Christodoulidis et al., 2007). Ectopic pancreas can occur at any age and is more common in men. Macroscopically, heterotopic pancreatic tissue consists of lobular white or yellow nodular mass with size ranging from 1-4 cm. Radiological findings are mostly non specific and differentiation from other submucosal tumors as leiomyoma, gastrointestinal stromal tumor and carcinoids is difficult. Histopathological examination confirms the diagnosis of aberrant pancreatic tissue. Commonly accepted Heinrich’s classification categorises aberrant pancreas into three categories- Type I (typical pancreatic tissue), Type II (pancreatic glands devoid of pancreatic islet) and Type III (pancreatic ducts only) (Von, 1909). It commonly involves submucosa but can occur in muscularis mucosa or serosa. Ectopic pancreatic masses present clinically when size is greater than 1.5 cm or bleeding or any pathological change is present. Most common symptoms include nausea and vomiting, abdominal pain, ulceration and weight loss. Pain can be attributed to tissue inflammation caused by local hormone production or mechanical obstruction. Presentations like pancreatitis, pseudocyst formation and malignant transformation of pancreatic tissue are rare but have been reported.15 cases of malignant transformation of heterotopic pancreas have been reported in the literature reviewed (Bookman, 1932; Inoue et al., 2010; Bini et al., 2010).

REFERENCES


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