CASE REPORT

Pancreatic Heterotopia Mimicking Gall Bladder Polyp – A Case Report

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ABSTRACT

Heterotopic pancreas, is also known as ectopic pancreas, pancreatic Choristoma, pancreatic rest, and aberrant pancreas. Ectopic Pancreas is a rare congenital anomaly defined as normal pancreatic tissue located outside its normal anatomical site without anatomical, vascular and neural continuity with the pancreas in the retroperitoneum. The overall incidence of ectopic pancreas at different locations is in decimals. Its occurrence in the gallbladder is rare and rarely reported in the literature. Ectopic pancreatic tissues are usually identified in an alive individual during cholecystectomy for gallstones, acute or chronic cholecystitis, or gallbladder polyps. They do not have a specific symptom. However, they mimic the symptoms of gallstones and acute or chronic cholecystitis. The clinical significance of this pathology is unclear. In this case, we report a 36-year-old female who was suffering from right upper quadrant pain for a year, which had the characteristics of biliary colic. She had a planned laparoscopic cholecystectomy as a day case procedure. The gallbladder specimen showed there were no stones postoperatively, and the specimen was sent for histological examination. The histology report identified an ectopic pancreatic tissue in the neck of the gallbladder near the cystic duct. The histological confirmation revealed that the ectopic pancreas was mimicking a gallbladder polyp and was producing symptoms of biliary colic.

Keywords: Cholecystectomy, **e**ctopic pancreas, heterotopic pancreas, gallbladder polyp

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INTRODUCTION

Heterotopic pancreas, also known as ectopic pancreas, pancreatic Choristoma, pancreatic rest, and aberrant pancreas is a rare congenital anomaly. It is defined as normal pancreatic tissue located outside its normal anatomical site without anatomical, vascular and neural continuity with the pancreas in the retroperitoneum. The overall incidence of ectopic pancreas at different locations is 0.55%-13.7% from autopsies and 0.2% in laparotomies.[1] Its occurrence in the gallbladder is rare and less reported in the literature. There are only 40-50 cases reported in the literature.[2] Ectopic pancreatic tissues are usually identified in an alive individual during cholecystectomy for gallstones, acute or chronic cholecystitis, or gallbladder polyps.[3] They do not have a specific symptom. However, they mimic the symptoms of gallstones and acute or chronic cholecystitis. The clinical significance of this pathology is unclear.

Case Presentation

A 36-year-old woman presented with intermittent right upper abdominal pain for years. The pain mimicked biliary colic pain, characterised by a band of discomfort in the right upper quadrant that radiated to the back. She had other symptoms like bloating and early satiety. She did not have any other symptoms like altered bowel habits, weight loss, reflux or hematemesis.

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The patient's blood tests were unremarkable. She underwent an ultrasound, which initially showed gallbladder polyps, and subsequent imaging as a follow-up investigation for gallbladder polyps demonstrated a solitary gallstone and an ongoing gallbladder polyp. As this is a symptomatic gallbladder polyp with a gallstone as per the ultrasound, we offered the removal of the gallbladder. The patient agreed to proceed with an elective laparoscopic cholecystectomy. Intraoperatively, the gallbladder was found to be macroscopically unremarkable. There were some adhesions around the gall bladder. The patient was treated as a day case procedure and was discharged on the same day. The postoperative period was uneventful. Histopathology revealed a 0.4 mm focus of pancreatic acinar tissue within the gallbladder wall, located between the lamina propria and muscularis propria, consistent with Type II heterotopic pancreas. The surrounding tissue around the pancreatic heterotopia showed features of chronic cholecystitis, with generalised chronic cholecystitis. The pathologist did not identify any dysplasia or malignancy. The ectopic pancreatic tissue (0.4 mm in max dimension) was present at the wall of the cystic duct margin section of the gall bladder (× 25 magnification) (Figure 1). No gallstones were identified in the histology. The patient was followed up for any unresolved symptoms. The patient did not have any symptoms during the follow-up. As the symptoms resolved, the patient was discharged with no further follow-up.

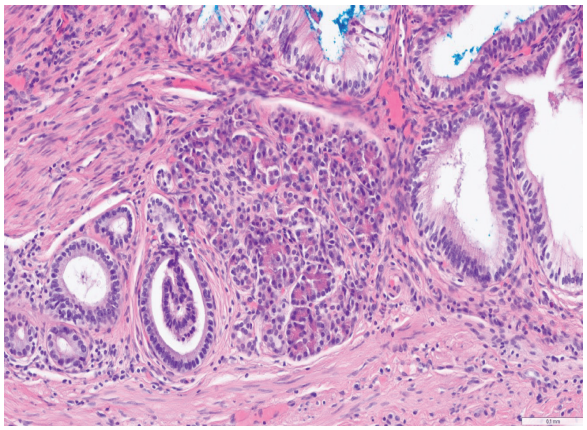

Figure 1: Pancreatic acinar tissue within the gallbladder wall (consistent with Type II heterotopic pancreas) (H&E staining; × 25 magnification).

DISCUSSION

Heterotopic pancreas is defined as pancreatic tissue found outside its normal anatomical location without connection to the native pancreas via ducts or blood vessels.[3,4] It is most commonly located in the stomach, duodenum, and jejunum, with involvement of the gallbladder being sporadic. Most cases are asymptomatic and identified incidentally on histopathological examination. Recognition of such findings is clinically relevant, as they may contribute to symptoms, cause local inflammation, or, rarely, undergo malignant change. Gallbladder involvement is exceedingly rare, with fewer than 40 cases reported in the English-language literature to date.[3,5,6] The prevailing theory for its origin involves aberrant migration of pancreatic tissue during embryogenesis. During foregut rotation and fusion of the dorsal and ventral pancreatic buds, small fragments of pancreatic tissue may become sequestered along the developing gastrointestinal tract. While these remnants are most often retained in the upper GI tract, the presence of heterotopic tissue in the gallbladder wall suggests either an abnormality in gut-biliary tract developmental interactions or misplacement via budding of pancreatic tissue into the cystic primordium.[3,4]

Heinrich's classification of heterotopic pancreas remains the most widely used histological classification. Type I pancreatic heterotopia has Acini, ducts, and islets of Langerhans. Type II has acini and ducts only, and Type III has Ducts only. Gasper-Fuentes modified the classification and added the extremely rare type IV, which contains islet cells only.[3,4] Our case represents Type II, with well-formed acinar tissue and ducts but no islet cells. Most cases are asymptomatic and discovered incidentally, as in our patient. When symptoms occur, they are generally related to the surrounding gallbladder pathology rather than the heterotopic tissue itself. There is a theoretical reason for the symptoms if there is a functioning pancreatic tissue causing symptoms.

The potential presentations include right upper quadrant pain, cholecystitis, or biliary colic. In rare cases, a heterotopic pancreas may be associated with pancreatitis, cyst formation, or neoplastic transformation.[7-11] Imaging modalities such as ultrasound, CT, or MRI rarely identify heterotopic pancreas preoperatively due to its

small size and the absence of distinct radiological characteristics. The cases reported in the literature have occasionally described polypoid or mural thickening lesions, but these findings are non-specific and indistinguishable[4,5] from other gallbladder masses or inflammatory changes.[12-15] The incidental detection in our patient underscores the necessity of routine histopathological analysis of all cholecystectomy specimens, even when the gallbladder appears macroscopically normal. Although the presence of heterotopic pancreas in the gallbladder has not been strongly linked to malignancy, there are reports of adenocarcinoma arising from ectopic pancreatic tissue at other gastrointestinal sites. There are no reports in the literature of pancreatic heterotopia in the gallbladder transforming into malignancy. There is a theoretical risk of malignancy in the gall bladder as bile is an irritant over the ectopic pancreas, which can, in the long term, cause transformation to malignancy. Moreover, its potential to cause local inflammation or mimic neoplastic processes justifies careful documentation. While the management of heterotopic pancreas is surgical excision, usually achieved through cholecystectomy, knowledge of this entity is essential for pathologists, surgeons, and radiologists.[13-15] Its presence may explain specific unexplained biliary symptoms and should be considered in the histopathological differential diagnosis of gallbladder wall lesions.

CONCLUSION

This case underscores the importance of an ectopic pancreas in the gallbladder. Rare findings, such as heterotopic pancreas, may otherwise remain undetected, and their recognition is essential for patient care and for adding to the limited body of literature on this entity.

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Ethical Approval: Patient's consent was obtained.

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