Case Report

# Heterotopic pancreas in gall bladder associated with chronic cholecystolithiasis

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## Abstract

Heterotopic pancreatic tissue in the gallbladder is a very uncommon lesion, which is an incidental finding in most cases. We report here, a case of an 18-year-old, post puerperal female, suffering from right upper quadrant abdominal pain with a clinical diagnosis of chronic cholecystitis, in whom heterotopic pancreatic tissue was found in the gall bladder.

**Key words**: Pancreas, heterotopia, gall bladder, post-puerperal

## Introduction

Heterotopic pancreas (HP) also referred to as ectopic pancreas, pancreatic choristoma, or pancreatic rest, is defined as the presence of pancreatic tissue in an anomalous location without any anatomic, vascular, or neural continuity with the main body of the normal pancreas.[1] HP has been noted in the stomach (24-38%), duodenum (9-36%), jejunum (0.5-27%), ileum (3-6%), and Meckel's diverticulum (2-6.5%).[2,3] Despite its congenital origin, pancreatic heterotopia is usually diagnosed during adult life. As it is asymptomatic most of the time, a definitive diagnosis is made on histopathological examination in a gall bladder, removed for other indications. We report a case of heterotopic pancreas of the gallbladder in an 18-year-old girl.

## Case Report

An 18-year-old girl, after two months of normal vaginal delivery, presented with a history of right upper quadrant abdominal pain for two months, associated with vomiting off and on. Upon general examination, she was afebrile, normotensive, and had no jaundice. Per abdominal examination, she showed tenderness in the right hypochondrium. Routine blood investigations revealed no abnormality. Her Liver Function Tests showed normal serum bilirubin of 0.40 mg/dL (0.20-0.80), serum ALT of 35.0 U / L (7-41), serum AST of 43.0 U/L (12-38), and serum alkaline phosphatase of 110.0 U/L (33-96).

Ultrasonographic examination of the whole abdomen showed no abnormality, except for cholelithiasis. Laparoscopic cholecystectomy was done. On gross examination, the gallbladder measured 8 cm in length and 2.5 cm in circumference, with a wall thickness ranging from 0.2 to 0.4 cm. The serosa was unremarkable. On cutting open, the mucosa was velvety flattened and focally ulcerated. Eight yellowish-green friable round stones, each measuring 0.6 cm in diameter, were noted in the fundus. A whitish area was seen in the neck region, which on microscopic examination, showed a well-circumscribed rest of heterotopic pancreatic tissue beneath the muscularis layer, composed of lobules of exocrine pancreatic acini and an occasional duct [Figures 1 and 2]. Islets of Langerhans were not seen. The remaining sections showed features of chronic cholecystitis.

## Discussion

Heterotopia of the pancreas is defined as the presence of pancreatic tissue in an abnormal location, without any anatomic, vascular, or neural continuity with the main body of the normal pancreas.[1] Otschkin, in 1916, published the first case of pancreatic heterotopia localized in the gallbladder, and since then, only 30 more cases of HP

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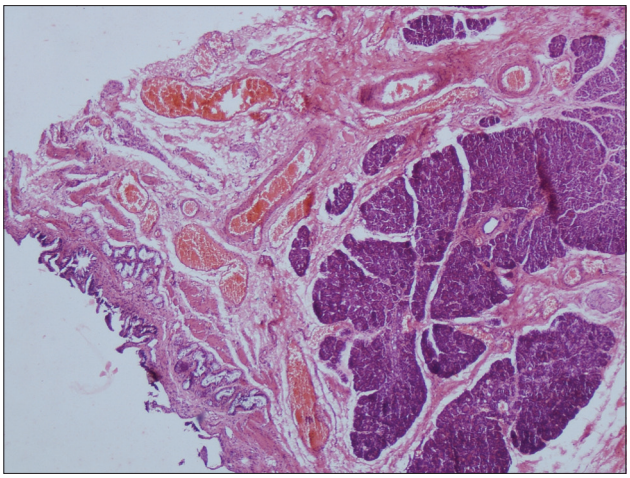

**Figure 1:** Photomicrograph of gall bladder mucosa with pancreatic lobules (H and E, ×100)

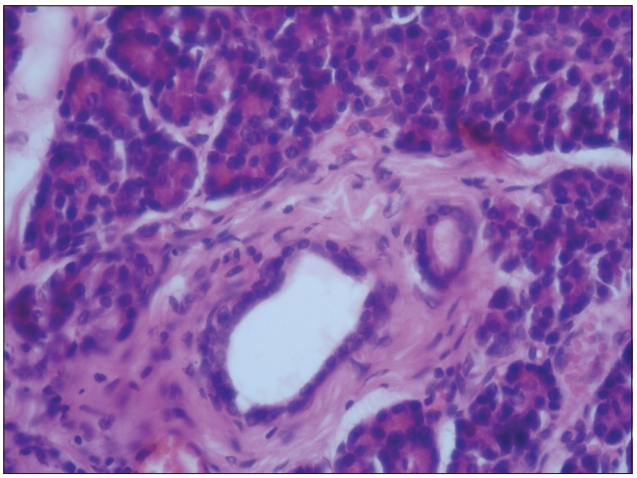

**Figure 2:** Photomicrograph of pancreatic acini with duct (H and E, ×400)

in the gallbladder have been reported in a review of the literature.[4] Heterotopic pancreasis commonly found in the stomach, small intestine, and Meckel's diverticulum, but has been rarely seen in the gallbladder, bile ducts, splenic hilum, or liver.[5,6] In these cases, a higher incidence of female patients between 40 and 50 years of age was observed.[7] Preoperative diagnosis is rarely possible, either clinically or radiologically, as it is a very uncommon pathological entity, in which microscopic examination confirms the diagnosis. The indications for surgery are in symptomatic patients only. Sometimes, it can cause hemorrhage and obstruction of the bile duct and gastrointestinal tract.[8] Heterotopic pancreas may be subject to pancreatitis, abscess, or cysts, and pancreatic tumors such as adenocarcinoma, islet cell tumors, and so on.[9,10]

Heterotopic tissue is usually located in the neck or fundus of the gall bladder, varies in size from 0.1 to 1.0 cm and may exhibit several patterns, ranging from intramural to exophytic to polypoidal lesions.[5,11] As there is no submucosal layer in the gall bladder, HHeterotopic pancreas is usually seen in the muscularis. Microscopic examination shows a varying degree of excretory ducts, exocrine glands, and islets of Langerhans.[8] Microscopically, heterotopic pancreas has been classified into three types by von Heinrich—Type 1: Ectopic tissue with acini, ducts, and islets of Langerhans; Type 2: Ectopic tissue containing only a few acini and ducts, with absent endocrine elements—incomplete arrangement; Type 3: Ectopic tissue with only proliferating excretory ducts and absent exocrine acini and endocrine elements.[12] Our case was considered to be Type 2, based on the Heinrich classification. The clinical significance of aberrant pancreatic tissue in the gall bladder, a very rare entity, needs to be further explored.

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