Case report

Varicocoele caused by a pancreatic pseudocyst

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SUMMARY Pseudocysts of the pancreas, when large, can compress adjacent structures giving rise to a series of clinical symptoms and signs. We present a patient whose pseudocyst compressed the left renal and testicular veins, resulting in a left sided varicocoele. We can find no evidence of such a complication having been previously reported.

Pseudocysts of the pancreas are collections of fluid usually within the lesser sac, which occur as complications of acute and chronic pancreatitis.¹⁻³ They can present considerable problems in diagnosis as clinical presentation is highly variable.² The introduction of ultrasound has, however, greatly improved diagnostic accuracy.³

Complications of pseudocysts are not uncommon and include perforation into the peritoneal cavity and various hollow organs, haemorrhage, infection, and compression of surrounding structures.^{1 2 5-9} This paper presents a patient with compression of the left renal and testicular veins by a pancreatic pseudocyst, resulting in a left sided varicocoele.

Case report

A 50 year old personnel officer presented to hospital with epigastric and right upper quadrant pain associated with nausea and vomiting. There was no history of excessive alcohol intake and his past medical history included a mitral valvotomy and a right nephroureterolithotomy. Serum amylase levels were diagnostic of acute pancreatitis but other serological investigations, including serum calcium, were normal. He was treated conservatively and made a rapid recovery. Investigation of the biliary tree following the acute episode showed multiple gall stones. The patient was given a date for a subsequent cholecystectomy and discharged from hospital. He was readmitted three weeks later,

however, with another severe attack of acute pancreatitis. After this episode, a cholecystectomy was performed. The common bile duct was not explored as the operative cholangiogram was normal. The patient made an uneventful post-operative recovery.

He was readmitted three and five months later with further episodes of acute pancreatitis. An intravenous cholangiogram showed no evidence of residual stones in the common bile duct. An endoscopic retrograde cholangiopancreatogram confirmed that there were no stones within the biliary tree, but showed the main pancreatic duct to be much shorter than normal and to end blindly (Fig. 1). The accessory duct was identified but was too small to cannulate. The findings were consistent with the congenital anomaly of pancreas divisum.⁴ The patient experienced further attacks of abdominal pain and some six months after cholecystectomy he noted a progressively increasing left sided upper abdominal swelling. Clinical examination suggested a large pancreatic pseudocyst. A barium meal and ultrasound scan confirmed the diagnosis. Three weeks later he noted a swelling within his left scrotum and clinical examination established the presence of a left sided varicocoele. An intravenous pyelogram (Fig. 2) showed the left kidney to be depressed and the left ureter kinked, consistent with pressure from the overlying pseudocyst.

Six weeks after presenting with an abdominal swelling, the patient underwent a laparotomy. A large pseudocyst within the lesser sac, containing three litres of straw coloured fluid and debris, was found overlying the left renal and testicular vessels. The fluid was aspirated and the cyst drained into the

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Fig. 1a,b Endoscopic retrograde cholangiopancreatogram: cannulation of main pancreatic duct showed this to end blindly with no flow into accessory duct consistent with congenital anomaly of pancreas divisum.

stomach. Postoperative recovery was satisfactory and over a period of one month the varicocoele disappeared. Fifteen months after operation the patient remains well, having suffered no further attacks of pancreatitis. The pseudocyst has not refilled and there has been no recurrence of the varicocoele. A CAT scan, carried out three months after operation, showed that the left kidney had returned to its 'prepseudocyst' position.

Discussion

Pancreatic pseudocysts, which occur as complications of acute and chronic pancreatitis, frequently give rise to complications.¹⁻³ The frequency of these complications is as high as 26% in the first few weeks after formation^{5 6} and rises up to 75% after three months.⁷ Perforation into the peritoneal cavity, stomach, duodenum, small bowel, colon, bile ducts, and chest (pleural cavity and bronchus) have all been reported.^{1 2 5-9} Ascites without obvious perforation has also been documented.^{1 2 5 6} Compression of surrounding structures including the stomach, duodenum, small bowel, colon, bile ducts, and portal vein (compression of which may result in portal hypertension) has been recorded.^{1 2 5-9} Haemorrhage is a particularly dangerous complication associated with a high mortality rate. It may

Fig. 2a,b Intravenous pyelogram (a) one year before development of pseudocyst; (b) at time of pseudocyst. Comparison shows depression of left kidney and kinking of left upper ureter.

arise from the cyst wall, pseudoaneurysms, erosion into the splenic or pancreaticoduodenal arteries and the portal and renal veins.^{5 6} Pseudocysts may also become infected with resultant abscess formation.^{7 9}

We have been unable to find a case of a varicocoele secondary to a pancreatic pseudocyst in the literature. In our patient compression of the left renal and testicular veins by the pseudocyst was confirmed at operation, the left kidney having been shown on intravenous pyelogram to be depressed. Obstruction of the renal and testicular veins by a renal carcinoma causing a varicocoele is well recognised and this report substantiates the rule that all patients developing a varicocoele in later life should be fully investigated.

Spontaneous resolution of pancreatic pseudocysts is common within the first few weeks of formation, but rarely occurs after two months.³ Management of pseudocysts which persist should be surgical drainage, as persistent conservative management only leads to excessive morbidity and mortality.³ In this case report, drainage into the stomach was undertaken at six weeks, with no postoperative complications and consequent disappearance of the varicocoele.

The aetiology of the recurrent pancreatitis in this patient remains uncertain. It is unlikely that gall stones were the cause, as cholecystectomy failed to reduce the frequency of the attacks of pancreatitis and subsequent investigations have failed to detect residual stones in the biliary tree. The other possible cause is pancreas divisum. Pancreas divisum is a failure of the dorsal and ventral portions of the pancreas to unite *in utero*, resulting in the majority of the exocrine secretions entering the duodenum through the accessory duct. It has been shown that there is a high incidence of this malformation in patients with unexplained pancreatitis.^{4 10} The proposed treatment for patients with pancreas

divisum and recurrent pancreatitis has included pancreatic resection^{4 5} and sphincterotomy of the accessory duct by both endoscopy¹¹ and open surgery.⁴ In the present case it was decided to drain the pancreatic pseudocyst and observe the patient. At present, 15 months after internal drainage of the pseudocyst, the patient is well and symptom free.

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