Case Report

Idiopathic Pancreatic Pseudocyst in a Child : a rare entity

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Pancreatitis is uncommon in children. Pseudocyst formation as a complication of pancreatitis is even more uncommon, and leads to significant morbidity and mortality as compared to adult patients. Aetiologically, paediatric pseudocyst formation in children, most commonly occurs following trauma. Other possible aetiological factors can be other anomalies of the pancreaticobiliary system, viral illnesses and use of steroids. We report a case of a 3 year old child who presented with pseudocyst of pancreas of idiopathic aetiology and discuss the management of such a case.

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Case Report

A well nourished, fully immunised, active 3 year old girl presented to the outpatient clinic complaining of vague upper abdominal discomfort intermittently since 3-4months. The mother noticed an upper abdominal fullness since the preceding 10 days. There was no history of associated fever, vomiting, abdominal pain or any history of abdominal trauma or any significant past illness.

Examinations **—** On examination, there was fullness in the epigastric region, extending laterally onto both hypochondria and inferiorly to the umbilicus. It was soft, non-tender, with ill-defined margins. Biochemical investigations were unremarkable. Ultrasonography (USG) revealed a large, hypoechoic lesion in the epigastrium, posterior to the stomach and pushing it anteriorly. Computed Tomography (CT) scan confirmed a smooth, enhancing cystic lesion arising from the pancreas suggestive of a pancreatic pseudocyst (Fig 1), displacing the stomach anteriorly and the transverse colon inferiorly. Pancreaticobiliary malformation was ruled out on MRCP.

The child was given a conservative trial for a month, but, the mass had not regressed in size. After further 2 weeks, ie, 6 weeks since presentation, since the mass had not resolved nor regressed in size, she was taken up for surgery.

On exploration, a huge pseudocyst was seen arising from the pancreatic body, densely adherent to the posterior stomach wall, displacing the stomach anteriorly and the transverse colon inferiorly. Over a litre of clear fluid was aspirated from the pseudocyst and a cystogastrostomy done (Fig 2 a, b, c).

The child had an uneventful recovery and was discharged. She was followed up over 1 year, and has not had any similar complaints during the period.

Discussion

Pancreatitis is rare in children, and pseudocyst formation, as a complication of pancreatitis, is even rarer. While evaluating a child with abdominal pain, a clinician should have a high index of suspicion for diagnosing it. The pathogenesis involves disruptions in the pancreatic duct followed by secretions extravasating from the acinar

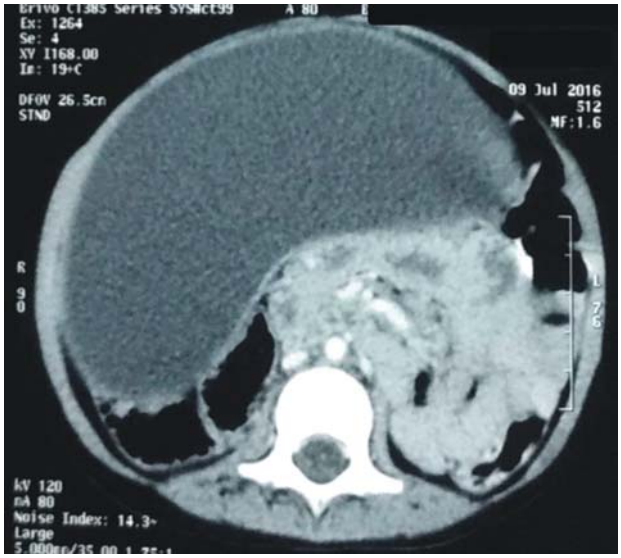

Fig 1 — CT Scan showing bulky heterogeneous pancreas with large smooth, enhancing, cystic SOL in upper abdomen, with mass effects

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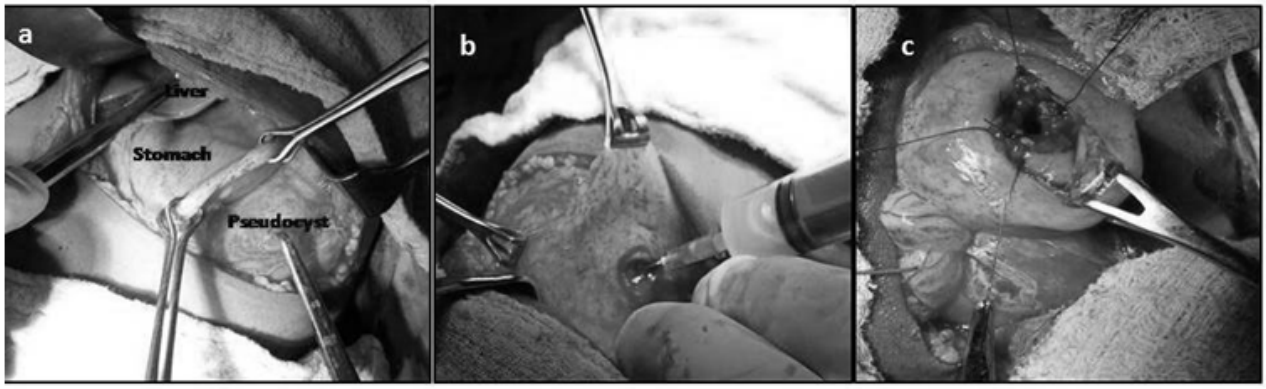

Fig 2 — (a) Relation of pseudocyst with stomach, (b) Aspiration to confirm pseudocyst, (c) Cystogastrostomy being fashioned

cells of the pancreas.Trauma is the commonest cause of pseudocyst formation in children (over 60%), when the pancreas gets compressed against the vertebral column. It may also form as a sequelae of pancreatitis, pancreaticobiliary system anomalies like pancreatic divisum, viral illnesses and steroid use. Our patient did not have any history of trauma, nor did her history, biochemical or imaging findings suggest any other aetiology. Hence, itwas considered to be idiopathic. The challenge of diagnosing such a case increases, in view of no suggestive aetiological history.

USG is the initial imaging of choice in children, since there is no ionizing radiation. On USG, pseudocysts are seen as unilocular or multilocular (with internal septations), well defined, smooth walled, hypoechoic lesions. If hemorrhage or infection is present, internal echoes or may be seen.

CT scan is mandatory for planning the treatment. It identifies the size, margin and nature of the pancreas with presence or absence of peripancreatic fluid. The pseudocyst appears as an area with well defined wall or capsule which enhances on contrast, and a central area of low attenuation. CT scan can accurately evaluate the presence and extent of pancreatic necrosis and peripancreatic fat inflammation.

ERCP / MRCP is essential to rule out any pancreatico-biliary anomalies.

Since paediatric pseudocysts are rare, there are few reported large series, and there is no consensus on optimal management. Pseudocysts <5cm usually resolve spontaneously or with conservative management, which involves hydration, analgesia, bowel rest and parenteral nutrition. Larger cysts are less likely to resolve spontaneously, and may be complicated by rupture, haemorrhage, infection, or lead to gastric outlet obstruction. So, larger pseudocysts and those failing a conservative trial require either internal or external drainage. Asymptomatic cysts >5cm even with minimal symptoms or those without any morphological or size change after a 6 week conservative trial require intervention[1]. Even if drainage is contemplated, conservative management for 4-6weeks, is needed for cyst wall maturation[2]. Though laparoscopic internal drainage has made advances in management of pseudocyst of pancreas over the last two decade, experience in paediatric population is limited and long-term outcome of relevant studies is awaited[3]. Open internal drainage, either cystogastrostomy, cystoduodenostomy or cystojejunostomy, remains the mainstay of management, the option depending on the anatomic location of the pseudocyst.

Advances in imaging and endoscopy have made image guided percutaneous drainage and endoscopic drainage safe and effective in skilled hands. Endoscopic treatment aims to create a communication between the cyst cavity and the gastrointestinal tract. However, it is dependent on the anatomical location of the pseudocyst. For endoscopic treatment to be feasible, the distance between the pseudocyst and the gastrointestinal wall has to be <1cm[4]. However, recurrence rates with percutaneous and endoscopic drainage procedures are higher than surgical internal drainage. Since most studies on percutaneous and endoscopic drainage procedures have been performed on adults, further studies to compare these techniques in children are required to determine the optimal management in children[5,6].

Till then, surgical drainage remains the management of choice in paediatric pseudocyst of pancreas.

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