ABSTRACT

A pancreatic pseudo cyst is a circumscribed collection of fluid rich in pancreatic enzymes, blood, and necrotic tissue, typically located in the lesser sac of the abdomen. Pancreatic pseudo cysts are usually complications of pancreatitis, although in children they frequently occur following abdominal trauma. Pancreatic pseudo cysts account for approximately 75% of all pancreatic masses. We are presenting a 12 year old boy who presented with a painful and tender epigastric mass 3 weeks after sustaining blunt abdominal trauma.

INTRODUCTION

Hidden by its retroperitoneal location pancreas has in the past been a somewhat mysterious organ. The rapid development of non invasive imaging has led to cysts of the pancreas to be recognised with increasing frequency. Unlike in the adults, pseudo cysts of the pancreas are rarely encountered in children. Most commonly pancreatic pseudo cysts in children are due to trauma and the sequel of acute pancreatitis.

Pancreatic pseudocyst (PP) is the most common cystic lesion of the pancreas. [1] A pancreatic pseudocyst is a type of cyst which is not contained inside an enclosed sac of its own with an epithelium lining. Instead, the pseudo cyst forms within a cavity or space inside the pancreas and it is surrounded by fibrous tissue. [2] It is a localized fluid collection rich in amylase and other pancreatic enzyme. The communication of such a cyst with the pancreatic ductal system may be direct or indirect via the pancreatic parenchyma. [3]

When a PP exceeds 6 cm in diameter and persists over 6 weeks, it is unlikely to resolve spontaneously and usually interventional treatment is necessary. An overall 30%- 50% of untreated persistent pseudo cysts are more liable for development of complications such as abscess formation, fistula, spontaneous rupture and massive haemorrhage which may lead to death. [4]

Regardless of the etiology of pseudocyst, the incidence is low, 1.6% - 4.5% or 0.5-1 per 100,000 adults per year. Pancreatic pseudo cyst (PP) in childhood is primarily a consequence of traumatic abdominal injury. The incidence of pseudocyst of the pancreas formation following post traumatic pancreatitis varies from 0% to 69% according to different studies, and this reflects the diversity of the severity of the pancreatic injury. [5, 6]
We are reporting a case of a 12 year old boy diagnosed with pancreatic pseudocyst and was managed in Hallelujah General Hospital, Addis Ababa, Ethiopia.

**Case report**

A 12yr old boy who was relatively healthy three days back at which time he developed severe crampy epigastric pain. He had no associated symptoms like vomiting, fever or diarrhoea.

Three weeks prior to the onset of the symptom, he sustained blunt trauma to the abdomen while playing with his friends but had no any symptoms at that time.

On physical examination, vital signs and anthropometric measurements were normal. He had palpable, ill defined mass over the epigastriac and left upper quadrant area with a size of 10x10cm and was tender.

On investigation abdominal ultrasound showed an encapsulated cystic mass in the lesser sac (10.4x 9.5cm) with stratum at the base abutting the duodenum to the right and abdominal CT was recommended.

CT of the abdomen showed a 12x 10x10 cm cystic mass at the lesser sac. It has thin wall with no enhancement of the capsule. Debris was seen inside. The stomach is distended with fluid and the proximal part of the duodenum also dilated. Therefore it was concluded as big cyst at the lesser sac and most likely pseudo cyst of the pancreas likely with compression of the duodenum.

He was then evaluated by a paediatric surgeon and was started on conservative management which included IV antibiotics for a week and bed rest. After completing treatment the symptoms disappeared and appointment given to be evaluated after two weeks. One week prior to the appointment date, he developed severe crampy epigastric pain leading to difficulty of walking straight, and inability to lie on the left side. He had no associated symptoms like vomiting, loss of appetite, fever or diarrhoea.

After evaluation by the paediatric surgeon again, surgery was decided.

**Intra OP Finding**

There was a big (10x12cm) cystic lesion just behind and inferior to the stomach containing around 600 ml haemorrhagic fluid sucked from the sac. Cystogastrostomy was done. He was treated with double antibiotics and discharged home in stable condition.
Pancreatic pseudo cyst in paediatric population is quite rare, although it is well documented as a sequel of pancreatic insult with ductal disruption and leakage of pancreatic enzymes into surrounding soft tissues. Pancreatic pseudo cysts are by far the commonest cysts of the pancreas constituting 70% of all pancreatic cysts. Blunt trauma of the abdomen is the cause of pseudo cyst formation in the majority of cases in children. Pancreatitis is an uncommon cause of pseudo cyst in children. [7] Post traumatic pseudo cysts tend to occur in the body and tail reflecting the fact that most ductal injuries occur in the body of the pancreas as it crosses the vertebral column. [8] However, in children pseudo cyst form commonly due to injury to the gland of substance rather than the ducts. Pancreatic pseudo cysts occurring after acute pancreatitis can be located anywhere in between mediastinum and scrotum because of necrotizing effect of pancreatic enzymes. In case of traumatic pancreatic pseudo cysts trauma is often trivial and not reported by the patient or parent. Complications may occur in as many as 25% of cases of pseudo cyst during conservative management in children and therefore, children should undergo internal drainage earlier than in adults (3 to 4 weeks vs. 6 weeks respectively). [7] The pathogenesis of pseudo cysts seems to stem from disruption of the pancreatic duct due to pancreatitis or trauma followed by extravasations of pancreatic secretions. [9] Primary symptoms include abdominal pain and bloating, nausea and vomiting which was the same as our patient. Other symptoms include loss of appetite, diarrhoea, weight loss and fever. The size of pseudo cysts of the pancreas varies widely as big as like that of our patient’s or might not be palpable at all. Therefore, a pseudocyst of the pancreas should be suspected in a child with epigastric pain, abdominal mass, fever, vomiting and elevation of serum amylase. [10] A history of blunt abdominal trauma or acute pancreatitis is a significant component of the child’s history.
Possible complications associated with pseudocyst of the pancreas include pancreatic abscess, rupture, haemorrhage, or gastric outlet obstruction. Our patient had symptoms of gastric outlet obstruction but there was no abscess formation but was treated with full course of antibiotics.

Ultrasonography and CT scanning are the preferred imaging modalities used to diagnose and follow the course of pancreatitis and pancreatic pseudo cyst. [11] Sensitivity rate of ultrasound in the detection of pancreatic pseudo cyst are 75% to 90%. [9]

**Conclusion**

Pseudo cyst of the pancreas in children is a very rare but potentially troublesome clinical entity, whose management depends on the severity of pancreatic trauma, size and symptoms of such a pseudo cyst. Small asymptomatic pseudo cyst of the pancreases is managed conservatively whereas the treatment of persistent, large and symptomatic pseudo cyst remains to be surgically drained. [12]

**Acknowledgment**

I would like to thank Tihitena Negussie Mammo, Assistant Professor of Surgery Consultant General & Paediatrics Surgeon School of Medicine Addis Ababa University for taking interest in the case and giving the appropriate surgical management. Also I would like to extend my gratitude to Ms Solome Mesfin for her assistance in obtaining and organizing the records for this case report.

**REFERENCES**


