Curr Pediatr Res 2015; 19 (1 & 2): 55-57 *ISSN 0971-9032*
www.currentpediatrics.com

Pancreatic pseudocyst in a child: A case report.

Om Shankar Chaurasiya, Sapna Gupta

Department of Pediatrics MLB Medical College, Jhansi, U.P. India

Abstract

Pancreatic cysts are challenging lesions to diagnose and to treat. The history of acute pancreatitis is significant as it is one of the cause for pseudopancreatic cyst in children. Acute pancreatitis is recognized with increasing frequency in the pediatric population as a result of trauma, biliary tract disease, viral illness, states of intracranial hypertension and steroids. However trauma is the most common cause of pancreatic pseudocysts in children. The diagnosis requires the careful integration of many historical, radiographic, laboratory, and other factors, and management is markedly different depending on the type and size of cystic lesion of the pancreas. We report a case of pancreatic pseudocyst in a 2 yrs old male child with left sided pleural effusion.

Keywords: Pancreatic pseudocyst, pancreatitis, abdominal ultrasonography

Accepted May 09 2015

Introduction

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 pseudocyst forms within a cavity or space inside the pancreas and is surrounded by fibrous tissue. Pancreatic pseudocysts do contain inflammatory pancreatic fluid (particularly the digestive enzyme amalyse) or semisolid matter[1].

Regardless of the etiology of pseudocyst, the incidence is low, 1.6%-4.5%, or 0.5-1 per 100 000 adults per year [2].Pancreatic pseudocysts are not common in childhood. In the world literature fewer cases have been reported [3].Pancreatic pseudocysts are a well recognized and common complication of acute and chronic pancreatitis [4].As a result of limited case reporting and under diagnosis by physicians, the frequency and true incidence of pancreatitis in children is not known [5].The incidence of PPC 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 [6-7].

Case Report

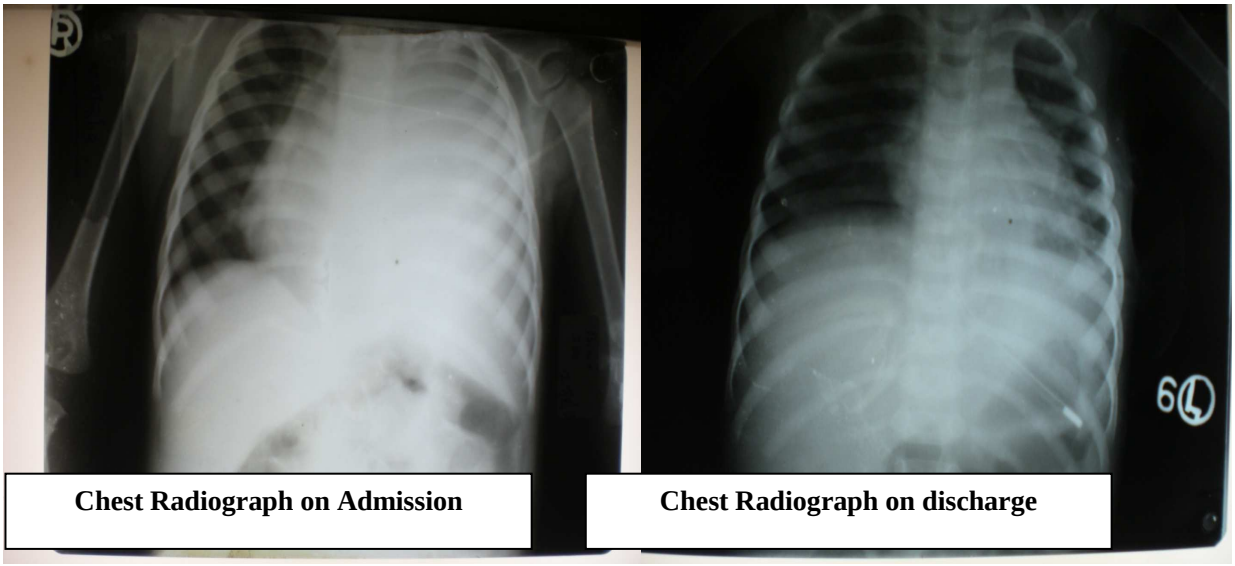
A 2 yrs old boy was admitted in surgery ward with complaints of pain in abdomen since few days , nausea with few episodes of vomiting and high grade fever. He was also having breathing difficulty so shifted to pediatric ward. On examination he was febrile and other signs of respiratory distress were present. Clinically diagnosed to have left sided pleural effusion .He also had slight fullness in epigastric region.

On admission his HCT was 20.2, TLC of 21000, Hb-6.9gm%. S.amylase – 144.8. Electrolytes and SGPT were normal. X ray chest showed evidence of Left sided pleual effusion. Pleural fluid examination showed proteins-5.01gm/dl, glucose- 2.35, cells- 2440/cumm (P-80%, L-20%).

He was managed with IVF, IV cephalosporins and aminoglycoside and was kept nil by mouth, after 4 days which his abdominal pain and vomiting subsided. He was allowed orally, but again he started having abdominal pain and nausea .Fever continued from mild grade to high fever peaks. Ultrsound abdomen was done which revealed pseudopancreatic cyst measuring 32x27mm in size at tail and 13x15mm at head of pancreas.

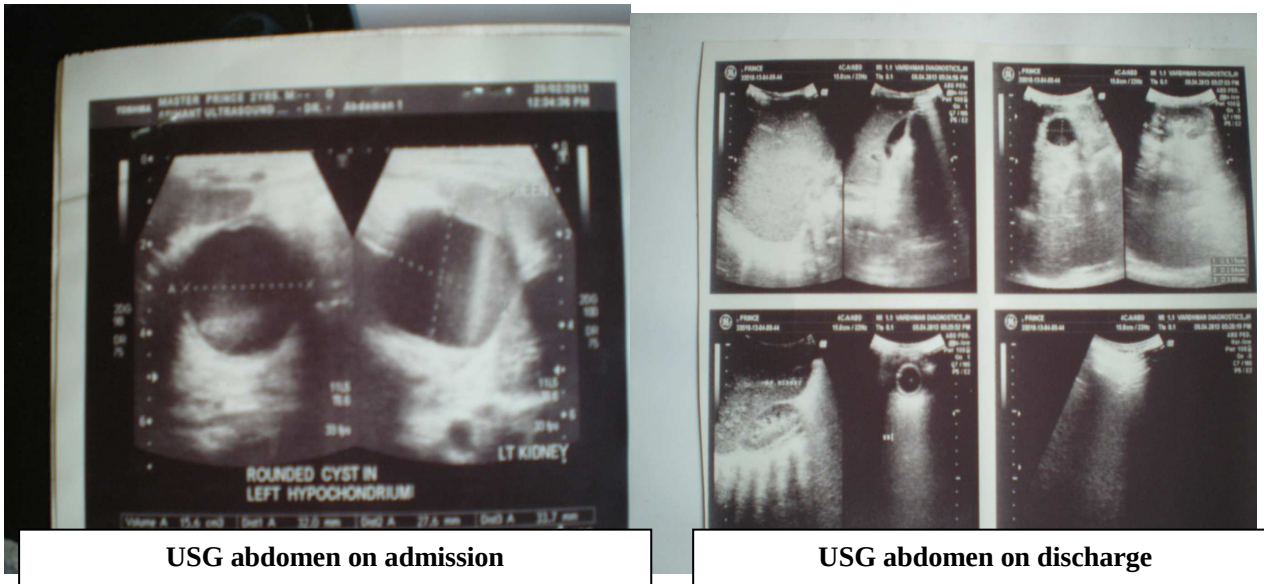
Now the diagnosis was Pseudopancreatic cyst with left sided pleural effusion. The patient was managed conservatively, but his fever was persisting very high, IV antibiotics were revised several times with no effect. Anti tubercular drug were started , after 4 days he started showing improvement and sense of wellbeing. His repeat chest X-ray showed clearing on Left side. Serial ultrasound showed decrease in the size of pseudopancreatic cyst to complete resolution and absolutely normal abdominal ultrasound.

Finally after 24 days of hospitalization he was discharged and remained in close outpatient follow up monitoring.



Chest Radiograph on Admission

Chest Radiograph on discharge



USG abdomen on admission

USG abdomen on discharge

Discussion

Pancreatic pseudocysts in children are rare, although it is well-documented as a primary consequence of pancreatitis needing in most of the cases surgical or endoscopic intervention [4].

The pathogenesis of pseudocysts seems to stem from disruptions of the pancreatic duct due to pancreatitis or trauma followed by extravasation of pancreatic secretions [2].Although a history of acute pancreatitis would be significant[4].It is recognized with increasing frequency in the pediatric population as a result of trauma, biliary

tract disease, viral illness, states of intracranial hypertension and steroids [8].. Trauma is the most common cause of pancreatic pseudocysts in children.

A pseudocyst of the pancreas should be suspected in a child with epigastric pain, abdominal mass , fever, vomiting and elevation of serum amylase [3].A history of blunt abdominal trauma or acute pancreatitis is significant.
Renal cysts, gastrointestinal reduplications, mesenteric cysts, teratomas and dermoid cysts, hydronephrotic cysts, a Wilms tumor, neuroblastoma, polycystic kidney and retroperitoneal hematomas should be considered in the differential diagnosis [3,9].

Ultrasonography and CT scanning are the preferred imaging modalities used to diagnose and follow the course of pancreatitis and pancreatic pseudocysts. Ultrasonography is the primary screening tool for evaluation of the pediatric pancreas, due to the absence of ionizing radiation and ability to image without sedation[6].Sensitivity rates for US in the detection of pancreatic pseudocysts are 75% to 90%.[2]. MRI is another modality to diagnose pancreatitis and is used for the same indications as CT scanning.
Endoscopic retrograde cholangiopancreatography (ERCP) is essential for evaluation of pancreatic and biliary

anomalies. Roentgenography may demonstrate nonspecific findings[5].
Elevated serum or urine amylase levels aid in the diagnosis of pancreatitis and peak 48 hours after onset. Serum amylase levels are typically elevated for as long as 4 days[5].

Most pseudocysts resolve spontaneously with supportive care. The size of the pseudocyst and the length of time the cyst has been present are poor predictors for the potential of pseudocyst resolution or complications[2].Studies have demonstrated that most small pseudocyst <6cm resolve spontaneously [10].

Pseudocysts should be treated due to potential serious risks. If a complication causes the enzymes and toxins in the pseudocyst to enter the bloodstream, the heart, lungs, kidneys, or other organs could be seriously adversely affected. Some cysts require surgical removal [11].

In conclusion, Pseudopancreatic cyst in children is a rare but nevertheless significant clinical entity, whose management depends on the size of the pancreatic injury, and available experience and expertise with percutaneous, endoscopic and internal drainage procedures [10-11].

References

1. Jani N, Murad BH, Schulick RD, Hruban RH, Cunningham S T. Diagnosis and Management of Cystic Lesions of the Pancreas, Diagnostic and Therapeutic Endoscopy, 2011 , Article ID 478913, 9 pages http://dx.doi.org/10.1155/2011/478913
2. Habashi S,Draganoy P.World J Gastroenterol. 2009 7; 15(1): 38-47.
3. Rubinoff M L, Park C, Tauber J B, Zuckerman S W, Burbank. Pancreatic Pseudocysts In Children Report of a Case and Review of the Literature; California Medicine, 1967,07,: 13-514.
4. Goyal S, Raju R, Yadav S . Pancreatic Pseudocyst of Gastrohepatic Ligament: A Case Report and Review of Management JOP. J Pancreas 2012 Jul 10; 13(4): 439-442
5. Hebra A, Cuffari C, Pediatric Pancreatitis and Pancreatic Pseudocyst Workup ,Oct 21 2009 , medscape
6. Benifla M, Weizman Z. Acute pancreatitis in children. J Clin Gastroenterol. 2003; 37: 169-172.
7. Cabrera R, Otero H, Blesa E, Jiménez C, Núñez R. Pancreatic pseudocyst: review of 22 cases. Cir Pediatr. 1997; 10: 49-53.
8. Tomar S, Bakhshi S, Kabra SK, Arya LS . Pancreatic pseudocyst complicating treatment of acute lymphoblastic leukemia. Indian Pediatrics 2003; 40: 670-672
9. Kilman, J. W., Kaiser, G. C., King, R. D., and Shumacker, H. B., Jr.; Pancreatic pseudocysts in infancy and childhood, Surgery, 1964; 5: 455..
10. Steven L Werlin . Pseudocyst of the pancreas. Nelson Textbook of Pediatrics. Kliegman RM, Behrman RE, Jenson HB, Stanton BF. 19 edition 2011.Elsevier Inc Philadelphia.
11. Giakoustidis A, Antoniadis N, Giorgakis I, Tsoulfas G, Dimitriadis E, Giakoustidis D; Pancreatic pseudocyst in a child due to blunt andominal trauma during a football Game , Hippokratia 2012, 16, 1: 71-73.

Correspondence to:

Om Shankar Chaurasiya
Department of Pediatrics
MLB Medical College
Jhansi 284128 U.P.
India