Case Report

TOTAL TRAUMATIC PANCREATIC TRANSECTION IN A CHILD, NON-OPERATIVE MANEGMENT: A case report

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ABSTRACT

We hereby report a case of total traumatic pancreatic transection through the body of pancreas in a 7 years old boy, who sustained a blunt abdominal trauma. The patient was managed nonoperatively and showed a speedy and complete recovery without complication. This is relatively a rare childhood injury which responded dramatically to conservative therapy. Therefore, we feel it worths reporting.

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INTRODUCTION

After cystic fibrosis, acute pancreatitis is probably the most common pancreatic disorder in children. Blunt abdominal injuries, mumps and other viral illnesses, multisystem diseases, congenital anomalies and biliary microlethiasis account for most known etiologies.[1] Child abuse is recognized with increased frequency as a cause of traumatic pancreatitis in the small pediatric age group.[1,2]

Pancreatic injuries are found in 3-12% of children sustaining abdominal trauma, the majority of injuries in children result from non-penetrating trauma to the abdomen. The pancreatic body or neck is usually injured by direct compression against the spine, whereas the pancreatic head or tail is injured by blows to the flanks.[2] Complete transection is rare.

Non-operative management of pancreatic contusion and transection diagnosed radiologicaly is effective and safe.[3,4]

CASE REPORT

Our index case is a previously healthy seven years old boy who presented to Emergency Room at 3:00 AM with history of abdominal pain of one day duration, pain was steady, generalized and of no specific nature. No history of vomiting but nausea, no diarrhea, fever and urinary symptoms. Initially,the family and the patient denied any history of abdominal trauma. Clinically, the patient was ill looking, in pain, and uncomfortable. Whole body examination was normal apart from low-grade fever (37.5°C) and generalized abdominal tenderness with guarding all over. Initial laboratory and radiological results showed normal CBC, LFT, PT, aPTT, ABG, CXR, and Abdominal X-Ray. Abdominal Ultrasound showed free fluid collection between bowel

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loops and in the right subhepatic space.

The patient was admitted as a case of acute abdomen (possibly complicated appendicitis), a pediatric surgeon was informed and diagnostic laparoscopy was kept at the back of mind.

Reassessment after six hours was done which revealed new facts. The family, later on, gave a history of blunt trauma by the handlebar of a bicycle, patient became more ill with localization of the pain and tenderness over the epigastrium and left upper quadrant without skin discoloration. Serum amylase was 362 IU/L.

At that time pancreatic trauma was suspected, urgent abdominal CT scan with double contrast was done which revealed total pancreatic transection of the body of pancreas. (Figure 1) So, pancreatic transection was our working diagnosis and non-operative management was our plan of treatment. Patient was kept Nothing Per Oral (NPO), with N/G tube drainage, maintaining his hydration, electrolyte and acid base status. TPN, painkiller, antibiotics, and H_2 blockers were given.

Patient showed quick recovery in response to the above management started from the third day of admission. Serum amylase returned to normal at the 4th day of admission. Frequent abdominal Ultrasound done (last one, 60th day of illness) showed resumption of the fluid with no abscess or pseudocyst formation. Patient started oral intake at the 11th day of admission and discharged at the 14th day.

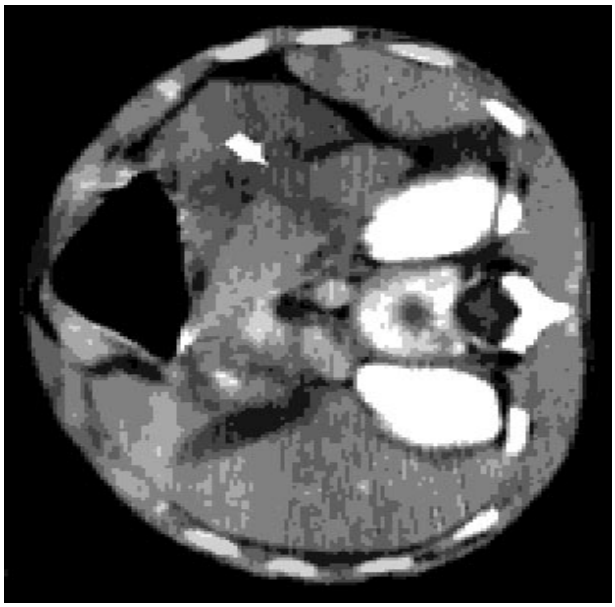

Figure 1: Computed tomography of abdomen with intravenous and oral contrast showing a transection through the body of the pancreas.

DISCUSSION

The pancreas is the fourth most commonly injured intra abdominal organ after kidney, spleen, and liver in children who sustain blunt abdominal trauma.[5,6]

The diagnosis and management of pancreatic injuries is controversial. In adults most pancreatic injuries result from penetrating trauma, and the diagnosis is frequently established in the operating room. Pancreatic injuries in children usually result from blunt trauma and present with abdominal pain, tenderness, leukocytosis, and hyperglycemia. Unfortunately, the physical examination and laboratory findings associated with pancreatic injury are neither specific nor sensitive.[3]

The liberal use of CT scan to evaluate the abdomen in an injured child has made it the modality of choice for identifying and characterizing pancreatic injuries.[3] However, several studies have suggested that CT either misses or under estimates the severity of pancreatic injury.[7] Others feel that the use of Ultrasound has made prompt objective diagnosis of blunt pancreatic injuries possible and has provided a sound basis for planned conservative treatment of these injuries so that unnecessary laparotomies are avoided.[6]

Initially, serum amylase levels are normal in 10-15%of patients. Serum lipase is more specific than amylase for acute inflammation.[1] The management of blunt pancreatic injuries may be conservative or surgical. Some authors recommend conservative management under close Ultrasound control for contusions of the pancreas, obstructive pancreatitis, and pancreatic pseudocysts diagnosed early.[6] The most important problem is the identification of major ductal injuries which requires emergency ERCP.[3,5]

Other studies also recommend non-operative management of even complete pancreatic transaction with a median length of hospitalization of 24 days (range, 6-52 days).[8] Surgical management is under taken for the control of hemorrhage, renal injury, suspicion of pancreatic ductal rupture or failure of conservative management.[6] A study recommend early surgical management with more expeditiously returns the child to good health and lessens the inconvenience of emotional stress associated with prolonged hospitalization.[9]

Pseudocysts may form after pancreatic injury, and if large or symptomatic, can be managed successfully by percutanous drainage with a mean time to diagnosis of 11 days.[3,4,6]

REFERENCES

1. Nelson textbook of pediatrics, 16th edition, 2000.
2. Sivit CJ, Tayler G.A, Eichelberger MR.Visceral injury in battered children: a changing perspection. Radiology 1989;173(3):659-61.
3. Shilynasky J, Sena LM, Kreller M, Chait P, Babyn PS, Filler RM, Pearl RH. Nonoperative management of pancreatic injuries in children. J Pediatr Surg. 1998; 33(2):343-9.
4. Bass J, DiLorenzo M, Desjardins JG, Grinon A, Quimet A. Blunt pancreatic injuries in children: the role of percautanous external drainage in the treatment of pancreatic pseudocysts. J Pediatr Surg 1988; 23(8): 721-4.
5. Plancq MC, Villamizar J, Ricard J, Canarelli JP. management of pancreatic and duodenal injuries in pediatric patients. Pediatr Surg Int 2000;16(1-2)35-9.
6. Gorenstien A, O'Haplin D, Wesson DE, Daneman A, Filler RM. Blunt injury to the panceas in children: selective management based on ultrasound. J Pediatr Surg 1987; 22(12):1110-6.
7. Sivit CJ, Eichelgerger MR, Taylor GA, Bulas DI, Gotschall CS, Kushner DC.Blunt pancreatic trauma in children: CT diagnosis. Am J Roentgenol, 1992; 158(5):1097-100.
8. Wales PW, Shuckett B, Kim PC. Long term out come after nonoperative management of complete traumatic transection in children. J Pediatr Surg 2001; 36(5):823-7.
9. Meier DE, Coln CD, Hicks BA, Guzzetta PC. Early operation in children with pancreas transection. J Pediatr Surg 2001; 36(2):341-4.