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Acute Necrotizing Pancreatitis Due to Ascariasis in a Child.

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ABSTRACT

Acute necrotizing pancreatitis although rare in children is associated with significant morbidity and mortality. Ascaris lumbricoides is a common intestinal parasite in tropical and temperate regions. Although usually asymptomatic, Ascaris infection can lead to biliary or intestinal obstruction and very rarely obstruction of the main pancreatic duct due to its smaller lumen and cause acute pancreatitis. We report a 5 year old male child with acute necrotizing pancreatitis associated with Ascariasis who was managed successfully.

KEYWORDS : Pancreatitis, Ascariasis, child.

Introduction: Acute necrotizing pancreatitis although rare in children is associated with significant morbidity and mortality. *Ascaris lumbricoides* is a common intestinal parasite in tropical and temperate regions. Although usually asymptomatic, Ascaris infection can lead to biliary or intestinal obstruction and very rarely obstruction of the main pancreatic duct due to its smaller lumen and cause acute pancreatitis. We report a 5 year old male child with acute necrotizing pancreatitis associated with Ascariasis who was managed successfully.

Case Details: A five year old male child admitted with history of pain in abdomen, abdominal distension and multiple episodes of vomiting round worms since three days. On admission he was febrile and had tachycardia (HR 160/ minute), tachypnea (RR 50/ minute), weak peripheral pulses, cold extremities, prolong capillary refill time and low blood pressure (65/48mmHg). Per abdomen examination revealed marked distension with generalized tenderness, rigidity & diminished bowel sounds. The breath sounds were absent in bilateral lower axillary and infra scapular areas. He was drowsy but had no neurological deficit. In view of severe abdominal tenderness, vomiting and guarding; intestinal obstruction with pancreatitis was suspected and was investigated accordingly.

On investigations, Hemogram revealed leukocytosis (Hb10.2gm%TLC 23,000/cu mm, Platelet 4.4lacs/cu mm) and C-reactive protein was 103mg/dl. His Serum Sodium, Potassium, Chloride & Calcium levels were 132meq/l, 3.5meq/l, 94meq/l and 8.2mg/dl respectively. Serum Amylase was1607 IU/L & Lipase was 445 IU/L. Roentgenogram erect abdomen showed multiple air fluid levels in bowel (Fig -1). Ultrasound of abdomen revealed dilated small bowel loops with sluggish peristalsis with worms in the lumen & moderate ascites with internal echoes.

Computerized Tomography of abdomen (Fig-2) and chest revealed bulky heterogeneous pancreas with extensive necrosis and fluid collection in peripancreatic, anterior pararenal space and Gerota's fascia associated with mesenteric fat stranding & thickness of retroperitoneal fascia. All features were suggestive of acute necrotizing pancreatitis with modified CT severity index of 10.[1]There was moderate ascites and thrombosis of entire splenic vein, superior mesenteric vein extending up to the confluence of portal vein, with partial thrombosis of portal vein.

There was bilateral lower lobes consolidation, atelectasis and moderate pleural effusion.

He was kept nil orally with continuous gastric drainage for seven days. He received intravenous fluids, antibiotics, Albendazole, Octreotide and low molecular weight heparin (LMWH). He required bilateral intercostal drainage, ventilatory and inotropic support. He was discharged after 10 days. He received LMWH for three months and repeat Doppler showed resolution of thrombus without recurrence of pancreatitis and any other complication.

Discussion: Acute pancreatitis (AP) is not rare in children, like in adults; its incidence is also on rise. Several studies reported increasing incidence since last 15 years.[2, 3] The reported incidence of AP in children varies from 3.6 to 13.2 cases per 100000/year.[4] While the incidence of acute necrotizing pancreatitis (ANP) is less than 1% in children.[5] There are few isolated case reports of acute necrotizing pancreatitis in children.[6, 7, 8, 9, 10]

In which drugs (L – Asparginase) and infections (Mycoplasma Pneumonia etc.) were found to be common causes. The case reports on Ascaris Lumbrecoides causing ANP are very few.[11, 12]

Ascaris along with intestinal obstruction can also obstruct hepatopancreatic ampulla, pancreatic and common bile duct. Obstruction can lead to pancreatitis and necrosis.[13, 14]The hepatobiliary duct network in children is narrow and more difficult for worm to enter. The presence of worms in intestinal lumina might have caused the obstruction at hepatopancreatic ampulla although the worms were neither seen at ampulla nor inside the duct as it may have migrated. The worm enters the pancreatic duct only as a result of abnormal migration. The clinical diagnosis of Ascaris pancreatitis requires a high degree of suspicion. While intestinal obstruction is more common in children, pancreatic ascariasis, unlike in adults, is rare.[11, 12, 14]

The most commonly involved vessel is the splenic vein (in 70% of patients). Involvement of all three vessels i.e. splenic, superior mesenteric and portal vein is extremely rare which was present in our patient.[15, 16]

The conservative approach to treat pancreatitis is still an accepted form of treatment. Our patient responded well and did not show any further complication.

Conclusion: Although acute pancreatitis is common problem in children, acute necrotizing pancreatitis is rare. In developing countries intestinal infestations with Ascaris Lumbrecoides should be suspected as one of the cause of pancreatitis. A high index of suspicion along with early institution of appropriate management can decrease morbidity and mortality related to ANP.

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Fig -1 Roentgenogram Erect Abdomen showing Bowels with Air Fluid Levels Suggestive of Intestinal Obstruction.

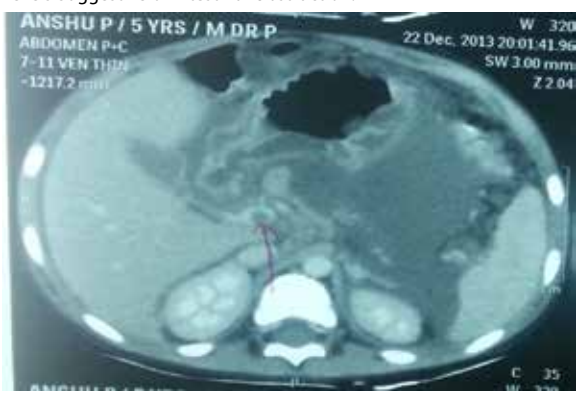

Fig -2 Computerized Tomography of abdomen s/o extensive necrosis of pancreas with

peripancreatic and pararenal fluid collection and thrombosis of Splenic, Portal (Red arrow) and Superior Mesenteric veins.

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