

Acute Pancreatitis In Pediatric Patients: Similarities and Differences From Adults

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Acute pancreatitis in children is an uncommon condition. Most of the reported studies are either case series or case reports, addressing some unusual features of this condition. The true incidence of acute pancreatitis in pediatric population from Pakistan is not known. However, infections as an etiology is often reported. Artunduaga et al reported the incidence of acute appendicitis as 1- 13 per 100,000 people in a recently published review article.¹ This figure is quite wide but still far less than that reported in adults.

Morinville et al in a survey (INSPPIRE group - The International Study Group of Pediatric Pancreatitis) conducted to formulate definition of acute pancreatitis in children which included patients up to 19 years of age, suggested three criteria of which at least two were required to make a diagnosis of this condition. This include an epigastric abdominal pain of acute onset with raised serum amylase and /or lipase activity on blood test. The values must be at least 3 times higher than the upper limit of normal. In addition, it includes ultrasound, CT scan, MRI / MRCP or endoscopic ultrasound findings suggestive of acute pancreatitis.²

Acute pancreatitis is an inflammatory condition. The inflammation is due to the activation of pancreatic enzymes. There are number of conditions that can activate this process. In children the common etiological factors include viral infections and trauma, however in most of the cases no etiological cause can be found even after intensive investigations. Less common causes include congenital anomalies like pancreas divisum, choledochal cyst and biliary tract anomalies. With increase in frequency of gallstones in adolescents, bile stone pancreatitis is also frequently

reported. There is a long list of other rare conditions that include hereditary, metabolic causes and drug induced pancreatitis.³

Efforts have been made to classify acute pancreatitis in pediatric patients on the basis of severity that shall help in reporting as well guide treating physician. For this reason, a consensus panel of experts from North American Society of Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) suggested a classification. Three types were proposed, namely mild, moderate and severe. Mild variety remained the most frequent type that usually resolves in a week time. Moderate type of acute pancreatitis though more intense in comparison with mild variety but this tends to settle after 48-hours of onset. In severe variety systemic symptoms including organ failure persists beyond 2-days and is associated with significant morbidity. However, this type is uncommon in pediatric population.⁴

The management of acute pancreatitis in children is straight forward and majority of the children recover uneventfully. The treatment includes fluid hydration to maintain hemodynamic stability, adequate pain management, and addressing nutritional need as sometime ileus is prolonged.⁵ Use of appropriate imaging modalities to confirm the clinical diagnosis is now easy. It also helps to identify the cause like calculus in bile duct which can be removed easily with endoscopic approach. Placement of biliary and pancreatic duct stents when needed is also possible. Complications of acute pancreatitis in pediatric population are rare. However, pancreatic pseudocyst is often reported after acute condition settles. Some patients may develop recurrent pancreatitis, highlighting the importance of follow up in children with this condition.

In this issue of JSP a study on acute pancreatitis in adult patients is published. In six-months period 146 patients were managed in a tertiary care set up. The overall mortality was almost 20%. These figure are different from pediatric population in whom the condition is uncommon with more benign presentation and minimal morbidity and mortality. In a study from China, 130 patients of acute pancreatitis were managed in a six-year period. There was no mortality

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in that series while 10% patients developed pseudocyst of whom only four needed drainage.⁶ Acute pancreatitis is uncommon in children, however its diagnosis and severity are less than that of adult population. Fortunately, majority of the children has a mild variety of the condition and is easily treated. Follow up is important to identify complications, in case they occur, so that timely management is provided.

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