PEDIATRIC SURGERY *Update* ©
Vol. 37 No. 01 JULY 2011

Necrotizing Pancreatitis

Necrotizing pancreatitis (NP) refers to a fulminant disease stage of the pancreas that occurs in 20% of all patients that develop acute pancreatitis increasing morbidity and mortality significantly. The initial etiology of the pancreatitis in children is in order of incidence trauma, drug-induced, biliary disorders (gallstones), infectious, metabolic and congenital. These conditions can lead to pancreatic autodigestion by enzyme activation. Symptoms include abdominal pain, vomiting, fever, elevated amylase and lipase with leukocytosis. Ultrasound typically shows a diffusely enlarged hypoechogenic pancreas. Contrast-enhanced CT Scan is the gold standard for diagnosing necrotizing pancreatitis. The affected portions of the pancreas in NP fails to enhanced due to disruption of the normal microcirculation. Initial management of NP consists of intensive medical support and prevention of infection (systemic and po non-absorbable antibiotics). With persistent biliary obstruction in the face of pancreatitis, ERCP should be used in combination with sphincterotomy to relieve the obstruction. Thirty to 70% of patients with NP develop a local pancreatic infection which triple the mortality. Infected peripancreatic collection should be percutaneously aspirated and drained. Surgery with necrosectomy should be delayed as long as possible and has no proven role in sterile necrosis. Complications associated with NP include persistent infection, hemorrhage, pancreatic fistula, duodenal obstruction and pancreatic insufficiency. The mortality is significant.

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Chilaiditi Syndrome

Chilaiditi syndrome refers to the abdominal symptoms that arise when a piece of bowel

interposition between the liver and the diaphragm. Chilaiditi syndrome is a rare anomaly which occurs in up to 0.28 percent of the population and a source of abdominal problems requiring emergency or elective surgery. Hepatodiaphragmatic interposition of the transverse colon or small intestine can cause Chilaiditi syndrome. Though usually asymptomatic, symptoms can range from intermittent abdominal pain, vomiting, bloating, constipation to acute bowel obstruction. A few children have developed respiratory distress. The plain chest and abdominal films are diagnostic. This condition can be mistaken for pneumoperitoneum. US can help avoid confusion when pneumoperitoneum is suspected. The presence of hepatodiaphragmatic interposition of the intestine requires no specific treatment in the absence of symptoms. Volvulus of the transverse colon, history of prior abdominal surgery and colon redundancy can be associated with Chilaiditi syndrome. Surgery is typically reserved for cases of catastrophic colonic volvulus or perforation because of the syndrome. In cases of severe Chilaiditi syndrome refractory to medical treatment, a minimally invasive colopexy should be considered as a possible treatment option.

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Gastric Electrical Stimulation

Gastric electrical stimulation (GES) has recently been developed as an alternative in the management of medically-refractory intractable nausea and gastroparesis associated with diabetes mellitus, postviral illness, idiopathic or postsurgical. The technique consists of placing two electrodes in the anterior seromuscular wall of the stomach hook to a subcutaneously placed stimulator using either an open or laparoscopic approach. Temporary percutaneously placed gastric stimulation electrodes using gastroscopy helps decide whether the patient will be a responder to the use permanent gastric electrical stimulation. The antiemetic effect of GES is mainly mediated by vagal afferent pathways. High-frequency GES has beneficial effects on symptoms in children with diabetic or idiopathic gastroparesis and severe nausea with vomiting. There is a significant improvement in symptoms over a prolonged period, and there are no adverse effects of the GES.

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ISSN 1089-7739