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Peptic Ulcer Disease

With the advent of more powerful acid inhibiting drugs (H2 antagonists) and proton pump inhibitors, surgery for refractory peptic ulcer disease (PUD) is becoming something of the past. We now manage rare complications of PUD such as bleeding, perforation and obstruction. PUD is either primary or secondary in origin. Secondary PUD are more common and primarily seen in infants the result of an associated condition such as prematurity, steroids, burns, trauma, immune deficiency and brain tumors. Primary PUD occurs more commonly in older children and adolescents the result of an imbalance between acid secretion and gastric mucosal protection. Helicobacter pylori infestation plays a crucial role in the genesis of gastritis and primary duodenal ulcer formation. Successful management of PUD disease encompasses radication of Helicobacter infection. Initial management of PUD includes medication to reduce acid production (omeprazole, ranitidine, cimetidine) combined with agents that improve mucosal defense (sucralfate). Bleeding PUD manifests itself with either melena or hematochezia. The bleeding site must be visualized during upper endoscopy. Most cases will stop with prompt medical management or endoscopic diathermy. Beyond 50% blood volume loss in a short period of time (8-24 hours) is an indication for surgery. Infants benefit from duodenotomy and bleeding ulcer ligation, while older children will need more definite ulcer surgery (vagotomy and pyloroplasty). Perforated PUD is the manifestation of a coexisting illness. Simple surgical closure with an omental patch is sufficient. Obstruction produces chronic vomiting due to pyloric scarring.

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Paraesophageal Hernias

Paraesophageal hernia (PEH), a rare entity in children, occurs when the stomach protrudes laterally through the esophageal hiatus toward the chest while the gastro-esophageal junction stays in anatomic position. Though most cases remain asymptomatic, PEH can cause upper bowel obstruction, gastroesophageal reflux, gastric volvulus, bleeding and perforation. Most PEH in children are acquired resulting after fundoplication.

A small group of children are born with the PEH. Groups of patients with a higher incidence of developing PEH after fundoplication includes infants under the age of one, neurologic impaired children and surgical patients where a crural repair is not done after fundoplication. PEH is linked to gagging before an antireflux procedure in children. Diagnosis of PEH is confirmed during a barium swallow and upper gastrointestinal series. A small PEH can be managed non-operatively if the child is asymptomatic. With the presence of symptoms or enlargement of the hernia operative repair must be done. A transabdominal approach is preferred for reducing the stomach and crural repair of the diaphragm. The use of mesh hiatal reinforcement is recommended for patients undergoing reoperation for PEH and recurrent gastroesophageal reflux or if the diaphragmatic crura is thought to require reinforcement at the time of the original surgery.

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Keloids

Excessive scarring is deposition of collagen out of the range of normal after surgery. Two types of excessive scarring seen in children and adults are hypertrophic scars and keloids. Hypertrophic scars are slight elevation of the scar restricted to the boundaries of the original wound, regress with time and rarely cause functional impairment. Hypertrophic scars rarely need to be removed. Keloids extend beyond the borders of the original wound, cause functional impairment, contain mast cells that release histamine and produce pruritus. Familial cases have been seen. Keloids do not regress over time and recur after surgical excision. Keloids contain large thick collagen fibers composed of numerous fibrils closely packed together. In contrast hypertrophic scars exhibit modular structures in which fibroblastic cells, small vessels, and fine, randomly organized collagen fibers are present. Earlobe piercing is the main etiological factor of earlobe keloids. Keloids removal is indicated in cases of functional impairment of a joint or for cosmetic reasons. Excision with intraoperative local injection of triamcinolone or alpha-2b interferon has produce some therapeutic advantage in severe cases. Early single postoperative fraction radiotherapy claims effectiveness in reducing keloid recurrences.

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