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Doxycycline Sclerotherapy

Lymphangiomas or cystic hygromas are congenital lymphatic vessels developmental anomalies affecting primarily the head and neck region of newborns. They manifest as multiple lymphatic fluid cysts involving muscle, fascia, blood vessels and nerves. This anatomic fact makes surgical excision very dangerous in respect to mutilating complications. Alternatively, sclerotherapy has progressively become the therapy of choice in many such cases. OK-432, bleomycin, fibrin glue sealant and recently doxycycline are the most commonly used sclerosing agents. Lymphangiomas are classified as either macrocystic, microcystic or mixed. Pretreatment imaging to classify the lymphangioma is mandatory, and MRI is the modality of choice for the most definitive evaluation and classification of these cysts. Macrocystic and mixed lesions respond well to percutaneous sclerotherapy, while microcystic disease is usually managed with surgical excision. Doxycycline is an inexpensive and available tetracycline with widespread use as effective sclerosant in other parts of the body (pleura, pericardium and postoperative lymphoceles). A recent study confirmed doxycycline efficacy in managing macrocystic and mixed lymphatic malformations of the head and neck in children without significant side effects (4). Aspiration and sclerotherapy is done at the operating room under general anesthesia using ultrasound cyst guidance.

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Pancreaticobiliary Maljunction

Pancreaticobiliary maljunction (PBM) or common channel is defined as communication of the common bile duct and pancreatic duct outside the sphincter of Oddi (main papilla). Etiology of PBM is caused by a disturbance in the embryonic connections (misarrangement) of the choledochopancreatic duct system in the early embryo, whereby the terminal bile duct joins with a branch of the ventral pancreatic duct system, including the main pancreatic duct. This malformation causes mixing of bile with pancreatic secretions resulting in choledochal cysts, recurrent pancreatitis, biliary tract carcinoma and

formation of protein plugs. The frequency of gallbladder cancer in patients with PBM without congenital biliary duct dilatation is very high making some consider prophylactic cholecystectomy or resection of the extrahepatic bile duct for carcinogenesis prevention. The diagnostic criteria for PBM are the radiological and anatomical detection of the extramural location of the junction of the pancreatic and biliary ducts in the duodenal wall done by MRCP or ERCP. Clinical features of PBM are intermittent abdominal pain, with or without elevation of pancreatic enzyme levels; and obstructive jaundice, with or without acute pancreatitis, while the clinical features of PBM patients with congenital cystic duct dilatation are primary bile duct stone and acute cholangitis. Objective in management of PBM is prevention of the reciprocal reflux of bile and pancreatic juice in the pancreas and the bile duct system. To achieve these aims the surgical (resection and bilioenteric reconstruction) or endoscopic approach (papillotomy) is utilized.

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Gastroparesis

Gastroparesis (GP) is a gastric disorder associated to symptoms of gastric retention or altered gastric emptying without evidence of mechanical obstruction. GP in children is usually associated with diabetes mellitus, postviral syndrome or after surgical procedures. Symptoms associated with gastroparesis include nausea, vomiting, early satiety, postprandial fullness and abdominal pain. Establishing the diagnosis of GP is difficult and requires UGIS, gastric scintigraphy, electrogastrography and endoscopy with biopsy. Initial management consists of dietary modification, prokinetic agents (cisapride), antiemetic therapy and pain control. More severe symptoms may need enteral or parenteral nutritional support. Endoscopic injection of botulinum toxin to the pyloric muscle can help. Surgery therapy might consist of pyloromyotomy, pyloroplasty (gastric emptying procedure), gastrostomy tube, jejunal feeding tube or gastrectomy procedures. Recently gastric electrical stimulation pacemaker placement has improved children with gastroparesis.

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