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Ethanol Sclerotherapy for Lymphangiomas

Lymphatic malformations are very difficult lesions to manage and eradicate in children. They constitute 6% of all benign lesions in infants and children. Head and neck are the more commonly affected regions. Most lesions will appear within the first two years of life of the child. The cystic lymphatic lesions are classified as macrocystic (> 1 cm), microcystic (< 1 cm) and mixed variety. Lymphatic malformations do not have a familial tendency and they do not become malignant with time. Surgical excision is the standard method of choice to manage lymphatic lesions that are localized and do not involve vital surrounding structures. Mutilating surgery is avoided at all costs. Diagnosis of the anatomic arrangements that these lymphatic malformations have with vital structure is obtained with the help of CT-Scan and MRI imaging. For unresectable or residual lymphatic cystic lesions the use of sclerotherapy has been advocated. Sclerosing agents include OK-432, Bleomycin, Fibrin glue, Doxycycline, 50% dextrose, Ethibloc (alcoholic solution of corn protein) and recently 98% Ethanol. Some agents are very difficult to obtained due to FDA regulation. Others cause toxic, allergic and irritant effects to the child. Sterile 98% ethanol produces minimal side effect, is easy to purchase and has a low cost. Ethanol sclerotherapy can be affected using CT-guided technology with the child under sedation or general anesthesia. Th volume of ethanol used for sclerotherapy should be no more than 1.0 ml/kg of weight.

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Ogilvie Syndrome

Acute colonic pseudo-obstruction also known as Ogilvie's syndrome is a massive colonic dilatation associated with signs and symptoms of colonic obstruction without an

evident mechanical cause. Ogive syndrome is observed predominantly in the elderly population with few cases reported in children. Predisposing factors for Ogilvie's syndrome in children includes postoperative state, trauma, infections, Sickle cell disease, cardiac diseases and chemotherapy for malignancy. Symptoms include constipation, abdominal pain, nausea, vomiting and abdominal distension. Diagnosis is suggested in flat simple abdominal films. Findings on CT-Scan are diagnostic showing massive colonic dilatation with diameters of eight to 12 cm and without evidence of overt mechanical obstruction. If left untreated, this dilatation can lead to colonic perforation and peritonitis in 10% of children with high mortality rates. Initial management consists of nasogastric decompression, bowel rest, hydration, electrolyte correction, along with discontinuation of drugs affecting bowel motility. If symptoms fail to improve with initial management then rectal tube or colonoscopy decompression is utilized. Neostigmine, an acethycholinesterase inhibitor which increases parasympathetic tone, has been found to be very effective in managing patients with Ogilvie syndrome. Neostigmine is slowly titrated in increments up to a total of 0.05mg/kg of weight. Also, oral erythromycin therapy has been used to manage this condition. Surgery will be needed if the child develops perforation or signs of bowel ischemia.

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Colostomy Closure

Colostomy closure is a common and important surgical procedure performed in children which carries a significant risk of morbidity and mortality. Some complication associated with closure of a colostomy includes wound infection, anastomotic dehiscence, bleeding, anastomotic stricture, incisional hernia and death. The periostoma lymphatics are colonized with bacteria, reason why surgery site infection rises during this procedure. For colostomy closure most children should be admitted the day before surgery for mechanical cleansing of the proximal and distal bowel. Systemic antibiotics during anesthesia induction are necessary. Infection rate is not affected by the use of oral antibiotics. Meticulous surgical technique including packing of proximal stoma, use of plastic drapes for surgical field immobilization, correct dissection, careful hemostasis avoiding contamination and performing an anastomosis in well vascularized limbs are

essential to reduce complications. Peritoneal irrigation, fascial closure in layers, adequate hemostasis and avoidance of dead spaces are also essential issues to watch for. Postoperative nasogastric tubes are not necessary. Early feeding is encouraged.

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