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Clostridium Colitis

Clostridium difficile enterocolitis (CDE) is also known as pseudomembranous colitis. CDE can be seen in children before, during or after surgical management for Hirschsprung's disease though most cases are seen preoperatively. This type of enterocolitis can be associated with fever, abdominal pain/distension, leukocytosis and diarrhea (protein losing enteropathy) which can progress to shock, prostration, toxic megacolon, perforation and even death. Clostridium difficile secretes two toxins (A and B) that produce a variety of local and systemic effects leading to depressed intestinal mucin production and cell renewal rendering the bowel susceptible to bacterial invasion and sepsis. Most cases of CDE have received prior antibiotic treatment for approximately one week or more. Other risk factors for CDE are colon procedures, acute functional bowel obstruction and critically-ill patients. Hirschsprung patients are at increase risk of developing CDE due to intestinal stasis, hypersensitivity to bacterial antigens, abnormality of prostaglandin secretion and abnormal mucin production. In long segment Hirschsprung's disease the aganglionic colon might also be involved. Diagnosis of CDE can be established by culture of C. difficile or a fecal positive toxin assay. Endoscopic evidence of pseudomembranous colitis can also suggest the diagnosis. Management of CDE consists of oral (or stomal) vancomycin or metronidazole therapy since it's more reliable. Refractory or chronic cases might need surgical derivation or bowel resection. The morbidity associated with this nosocomial infection is significant needing a high level of suspicion for early diagnosis.

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Adnexal Torsion

Evaluation of females with acute onset lower quadrant pain should always consider the possibility of ovarian and tube (adnexal) torsion. Ovarian torsion is associated with a mass, cyst, tumors or simply a normal ovary (30%). Cysts and tumors are the leading cause (70%) of torsion due to excessive rotation and ischemia of the adnexa. The right adnexa is more frequently involved than the left in torsion sometimes undistinguishable from acute appendicitis. Nausea, vomiting and pain are more often seen with ovarian torsion. Adnexal torsion is particular prone during premenarche years (7-10 year old girls). Preoperative diagnosis is very difficult. Ultrasonography using color Doppler signal can establish a high index of suspicion (echogenic mass, edematous ovary, free intraperitoneal fluid, absent blood flow) of torsion. Most cases present too late to be able to save the adnexa. At operation (or laparoscopy) the viable ovary should be untwisted and the necrotic ovary excised without untwisting the pedicle to avoid thromboembolism. Others feel a more conservative approach toward a necrotic ovary can maintain viable tissue with minimal morbidity (fever). Contralateral oophoropexy at the time of oophorectomy is widely recommended, more so if the torsion is associated with a normal idiopathic adnexa.

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Rare Branchial Remnant

Third and fourth branchial cleft remnants, known as complex branchial remnants, are extremely rare neck anomalies in children. Most branchial cleft anomalies (tags, cysts, fistulas or sinuses) come from faulty second branchial pouch development (supratonsillar fossa). The third pouch develops into the thymus and lower parathyroid glands, while the fourth pouch gives rise to the upper parathyroids and thyroid gland. Third branchial remnants are more common in the left side presenting as unilateral fistulas or sinus tracts that communicates with the pharynx at the level of the thyrohyoid membrane. They can

harbor ectopic thyroid or thymus tissue. A recurrent history of neck infection and drainage is commonly obtained. Fourth branchial anomalies communicate with the thyroid gland or pyriform sinus and give rise to thyroiditis. Surgical excision is the treatment of choice for all branchial remnants in the neck after subsiding any episode of infection with antibiotics. Recurrence is rarely seen after complete removal of the lesion.

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