



PEDIATRIC SURGERY Update © **Vol. 28 No. 06 JUNE 2007**

Vaginal Bleeding

Vaginal bleeding in the pre-menstrual female infant is cause for concern both medically and socially. Differential diagnosis of vaginal bleeding in this age group includes estrogen stimulation, vulvovaginitis, tumors of the lower genital tract, ovarian tumors, foreign bodies, or trauma. Transplacental estrogen stimulation can cause self-limited vaginal bleeding in newborns during the first two weeks of life. Vulvovaginitis is the most common gynecological infection in children caused by ascending enteric organisms due to poor hygiene and is managed with systemic antibiotics. Condylomas can cause painless vaginal bleeding. Tumors of the genital tract associated with vaginal bleeding include hemangiomas of the vulva, arteriovenous malformation of the uterus, rhabdomyosarcoma botryoid (the most common malignant tumor of the low genital tract in young females), endodermal sinus tumors of the vagina and endometrial carcinomas. Functional ovarian or adrenal tumors that produce estrogen can be associated with sexual precocity and vaginal bleeding. Foreign bodies in the vagina of a small girl produce local inflammation resulting in a foul smelling discharge which can be serosanguineous. The debris (foreign body) is often wads of toilet paper. Redundant urethral mucosa may prolapse through the urethral meatus and present as a friable polypoid lesion. Finally genital injury is a major cause of vaginal bleeding including those associated with child sexual abuse.

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Vocal Cord Paralysis

Unilateral or bilateral vocal cord paralysis (VCP) in children can be associated with ventricular septal defects, enlargement of the auricle, abnormalities of the great vessels, patent ductus arteriosus, or during operations for division of cervical tracheo-esophageal fistulas and surgery for congenital heart abnormalities or the neck (thyroidectomy). Most cases are iatrogenic with the left recurrent laryngeal nerve with a longer anatomic course being affected more often. VCP is the second most common cause of neonatal stridor. The

baby with unilateral VCP will show a weak, breathy cry, aspiration and cyanotic attacks with choking during feeding. Bilateral damage produces abduction of the cords, constant stridor and cyanotic attacks needing a tracheostomy. Diagnosis is made with direct videolaryngoscopy. Management strategies should be individualized and focus on maintenance of a safe and stable airway, acquisition of intelligible speech, and deglutition without aspiration. Unilateral VCP treatment is conservative including thickened feeding and anti-reflux measures. Laryngeal incompetence can be managed with injectable collagen. Irrespective of cause, morbidity associated with unilateral VCP is minimal. Although tracheotomy is not required, careful airway observation is important. Should tracheostomy be constructed vocal cord lateralization procedures with partial arytenoidectomy afford the highest operation-specific decannulation rate.

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Stings

The insects that inflict more venous stings than any other in children are the bees and ants. Stings from bees and wasps produce a local tissue reaction with a wheal and flair. Symptoms develop within twenty minutes of the sting and include urticaria, syncope and respiratory distress. Most serious sequelae is anaphylaxis which occur when the child has been previously inoculated. More than 500 stings are needed to cause death in a child. Management is local and systemic. The venom can be removed if the event has less than 20 minutes. Cold compresses will reduce pain associated with the sting and baking soda helps with the itching. Systemic support includes airway control, alpha agonists medication, inhaled beta agonist for bronchospasm and calcium for muscle spasms. Best prophylaxis is reducing exposure. Fire ants¹ sting can produce edema, pruritus, erythema, pain and burning with a characteristic wheal. Wound is cleaned with soap and water. Rarely systemic management is needed.

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