



PEDIATRIC SURGERY Update © **Vol. 28 No. 01 JANUARY 2007**

Idiopathic Scrotal Edema

This is a very uncommon cause of acute scrotal swelling, but considered the commonest cause of the 'acute scrotum' in prepubertal boys. Idiopathic scrotal swelling is characterized by edema and erythema of the scrotal wall, is usually bilateral and can sometimes involve the shaft of the penis. The swelling and erythema can extend into the abdominal wall and perineum. Children affected with acute scrotal swelling are four to six years in age with symptoms present for less than 24 hours at the time of initial medical evaluation. The cause of the swelling is usually not identified but can be associated to reaction to an allergen, bug bite, contact dermatitis or angioneurotic edema. Leukocytosis is absent, urinalysis is usually normal and urine culture is sterile. Peripheral eosinophilia is present in some patients. A connection with trauma, periurethral disease, or streptococcal disease appears unlikely. The differential diagnosis includes torsion of the testis or one of the testicular appendages, hydrocele, varicocele, trauma, tumor, idiopathic scrotal edema, and Henoch-Schönlein purpura. Color Duplex ultrasound of the scrotum will show increase testicular blood flow and thickening of skin and muscle of the scrotum. Exploration is required when a normal testis cannot absolutely be identified. Swelling usually resolves within two to five days. Management consists of bed rest, reassurance, and oral histamine.

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Epididymitis

Acute inflammation of the epididymis is an infectious process which usually occurs during adolescent years, very rarely during prepubertal ages. The infectious process is caused by a distal urethral obstruction, ectopic ureter entering the seminal vesicles or epididymis, or after instrumentation. Bacterial or viral organisms are involved in the infectious process. Epididymitis seems to be more common than acute testicular torsion. Early clinical manifestations of epididymitis include scrotal edema, pain, erythema, tenderness with an associated reactive hydrocele. The epididymis turns elongated and exquisitely tender to palpation. The differential diagnosis includes testicular torsion, torsion of the testicular

appendage or idiopathic scrotal edema. The urinalysis will demonstrate pyuria with bacteriuria. Leukocytosis is also identified. Color Doppler ultrasound or testicular scans can determine rapidly if we are dealing with torsion due to reduced or absent testicular blood flow in need of urgent surgery. In the event of doubt or absence of imaging studies the diagnosis of an acute scrotum requires scrotal exploration. Management of epididymitis includes intravenous antibiotics, pain medication, scrotal support and bed rest. Further renal ultrasound and excretory urography are needed after the episode subsides to determine a congenital urologic anomaly.

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Gastrostomy

Facilitating feeding directly to the stomach through a gastrostomy tube can be a life saving procedure for children. The most common indications for gastrostomy placement are the permanent or temporary need for enteral feeding access, the need for gastric decompression, and an access route to the esophagus for dilatations. The gastrostomy can be done open, laparoscopically or percutaneously depending on the general health of the child and associated medical conditions. When a child is referred for gastrostomy a reflux work-up should be done if the child has clinical history or sign of reflux. Work-up includes esophagogram and pH analysis. Should the work-up demonstrate reflux an antireflux procedure is recommended. Complications associated with a gastrostomy include those associated with the procedure such as bleeding, leakage with peritonitis, injury to the colon, wound infection, tube malfunction or migration leading to distal bowel obstruction. With time and use of the gastrostomy the child can develop a gastrostomy prolapse, granuloma formation, persistent gastrocutaneous fistula after tube removal, gastrocolic fistulas, volvulus around a malposition tube and erosion of the gastrostomy tube through adjacent organs. Once tube feeding is established there is a positive impact on the lives of the child and family.

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