



PEDIATRIC SURGERY Update © **Vol. 29 No. 04 OCTOBER 2007**

Hemoport Fragmentation

Hemoports catheters play a vital role in providing continuous central venous access for such therapy as parenteral alimentation, long-term antibiotics and cancer chemotherapy in children and adults. The tip of the hemoport catheter should lie within the superior vena cava or right atrial junction during placement. Placement can be done through the external or internal jugular vein or using the subclavian vein with the port usually lying infraclavicularly in the anterior chest area. Very rarely fragmentation with embolization of the port catheter can occur specially during removal of the port. Incidence of catheter fractures is 0.1%. Fracture is suspected if the catheter offers resistance to removal and/or the length removed is too short. The fragmented retained catheter can cause endocarditis, thrombosis, pulmonary abscess, dysrhythmia or sudden death. Causes of fracture include manufacturing defect, mechanical trauma, excessive hydrostatic pressure when flushing or infusing, material degradation, stress due to constant motion, deposition of fibrin, clot or calcium within the catheter, or pinching between the clavicle and the first rib. The fragmented catheter should be differentiated from a calcified "ghost" cast by CT-Scan. The fragmented catheter can stay within the vascular vessel, or embolized into the right heart or pulmonary arteries. Management should consist of percutaneous endovascular retrieval by an invasive cardiologist or radiologist.

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Psoas Abscess

Psoas abscess refers to a suppurative infection confined beneath the fascia of the psoas muscle. They occur rarely in infants and children. Psoas abscess are predominantly

primary meaning without another focus of infection in the body of the child. They are seen predominantly in younger children of developing tropical countries. Most primary psoas abscess are caused by *Staphylococcus Aureus*. Secondary psoas abscess is more common in Europe and North America with predominantly enteric bacterias and occurs after extension from Crohn's disease, appendicitis, cancer, urological infections or from an osseous source like spine, ileum or sacroiliac joint. The clinical syndrome can be confuse and presents with hip pain, and limping with flexion of the hip, positive psoas sign, or inability to ambulate. A mass associated with tenderness is palpable in the iliac fossa, lower abdomen or pelvis or the inguinal region. Peritoneal irritation is uncommon since the fascia covering the psoas muscle prevents spreading of abscess to retroperitoneum or free peritoneal space. Fever, elevated ESR and leukocytosis are almost always presenting signs. Either ultrasound or more specifically CT-Scan will reveal the diagnosis. Management consists of intravenous antibiotics and adequate drainage. Drainage can be accomplished with percutaneous techniques or extraperitoneal operative drainage. Morbidity and mortality are related to delay in management.

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Eosinophilic Esophagitis

Eosinophilic esophagitis is a primary pediatric disorder characterized by severe isolated eosinophilic infiltration of the esophagus unresponsive to acid blockade but responsive to removal of dietary food allergens. Infants and children demonstrate symptoms of vomiting, failure to thrive, abdominal pain, while older children and adults complain of dysphagia, heartburn, food impaction and chest pain. They can also present with food allergen sensitization, atopic disorders, allergic rhinitis, asthma, elevated IgE levels and peripheral eosinophilia. Esophagogram can demonstrate a distal stricture making the differential diagnosis include reflux stricture. The diagnosis is made during esophagoscopy with multiple biopsy showing more than 15 eosinophils per high power field. Goal of therapy is to alleviate signs and symptoms. This includes diet modifications to avoid allergens, elemental diets, systemic steroids, swallowed aerolized topical steroids, montelukast (a

leukotriene-receptor antagonist), and histamine receptors antagonists. Once the child or adult develops a stricture that does not respond to medical or dietary management esophageal dilatation is a therapeutic option. A new emerging therapy includes neutralizing antibodies against human interleukin-5.

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