



# **PEDIATRIC SURGERY UPDATE ©**

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### **IH in Prematures**

The incidence of inguinal hernia(IH) in premature babies (9-11%) is higher than full-term (3-5%), with a dramatic risk of incarceration (30%). Associated to these episodes of incarceration are chances of: gonadal infarction (the undescended testes complicated by a hernia are more vulnerable to vascular compromise and atrophy), bowel obstruction and strangulation. Symptomatic hernia can complicate the clinical course of babies at NICU ill with hyaline membrane, sepsis, NEC and other conditions needing ventilatory support. Repair should be undertaken before hospital discharge to avoid complications. Prematures have: poorly developed respiratory control center, collapsible rib cage, deficient fatigue-resistant muscular fibers in the diaphragm that predispose them to potential life-threatening post-op respiratory complications such as: need of assisted ventilation (most common), apnea and bradycardia, emesis, cyanosis and re-intubation (due to laryngospasm). Independent risk factors associated to this complications are (1) history of RDS/bronchopulmonary dysplasia, (2) history of patent ductus arteriosus, (3) low absolute weight (< 1.5 Kg), and (4) anemia (Hgb < 10 gm- is associated to a higher incidence of post-op apnea). Postconceptual age (sum of intra- and extrauterine life) has been cited as the factor having greatest impact on post-op complications. These observation makes imperative that preemies (with post conceptual age of less than 45 weeks) be carefully monitored in-hospital for at least 24 hours after surgical repair of their hernias. Outpatient repair is safer for those prematures above the 60 wk. of postconceptual age. The very low birth weight infant with symptomatic hernia can benefit from epidural anesthesia.

### **Warning!**

The FDA has recommended labeling changes for the use of anectine (succinylcholine chloride- depolarizing muscle relaxant). Anectine should not be used for routine, elective pediatric surgery. A series of cardiac arrests and deaths (36 cases reported in the last three years) after the use of anectine in children with a previously undiagnosed myopathy has prompted this issue. Children with myopathies have increase sensitivity to succinylcholine

developing rhabdomyolysis, hyperkalemia and cardiac arrest (mortality 55%). Healthy children undergoing surgery can have occult forms of myopathy that cannot be known beforehand. Otherwise, anectine is indicated in instances of rapidly securing the airway: emergency intubation, laryngospasm and full stomach.

### **Splenic Cysts**

Splenic cysts in children are either considered true epidermal (congenital), pseudocysts (post-traumatic), or infectious (echinococcus) in etiology. They are rare, benign, solitary cysts often producing few symptoms. They may present as a palpable mass in the left side of the abdomen or during evaluation for another abdominal problem. Ultrasound (large unilocular sonolucent cyst) is the most important diagnostic method, and can be supplemented by CT-Scan. The lining of the cyst is a flattened endothelium surrounded by fibrous tissue. This mesothelium can produce carcinoembryonic antigen (CEA). Indications for surgery are: (1) risk of complications (rupture, bleeding), (2) size greater than 5 cm., (3) infectious etiology, and a (4) symptomatic child (pain, mass or splenomegaly). Their management formerly total splenectomy has changed to: interventional sonography with fluid aspiration (catheter placement), or partial splenic decapsulation (cystectomy); the result of recognition of the physiologic importance (hematologic and immunologic) of the spleen, together with the development of radiological imaging and operative surgery. Long term follow-up with radionuclide scans is recommended.

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