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Laparoscopic Adrenalectomy

Adrenalectomy is another procedure that has yielded to the advantages of the laparoscopic approach in very specific situations. In the pediatric age the indications for adrenalectomy are mostly tumor related: neuroblastoma (the most common adrenal mass in a child), pheochromocytoma, adenoma, ganglioneuroma, neurofibroma, fibromas, incidentalomas and lipomas. Benign, well encapsulated, fibrous, and non-infiltrative lesions within the adrenal gland lend themselves to laparoscopic removal. Malignant (due to risk of port metastasis), large, infiltrative or lesions that need lymph node sampling, have bilateral involvement will need the conventional open approach. In children the lateral intra-abdominal approach provides a greater working place instead of the retroperitoneal approach used in adults. Right adrenal gland removal needs liver mobilization and secure closure of the short adrenal vein. Left adrenal removal is easier and can be accomplished after mobilization of spleno-colonic ligaments. Although the lap approach takes longer, the overall advantages are less pain, less morbidity, shorter hospital stay and better cosmetic results.

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Laparoscopic Ladd's Procedure

Malrotation of the bowel can be associated with midgut volvulus defined as clockwise rotation of the small bowel around the superior mesenteric vessels axis causing ischemia. The diagnosis is done with the help of both an upper contrast study and barium enema. Asymptomatic malrotation with near-point fixation of the duodenojejunal and ileocolic segment should undergo prophylactic Ladd's. Ladd's procedure consists of release of congenital duodeno-colic bands, separation of the duodeno-jejunal from the ileo-colic segment in a transverse fashion with removal of the appendix for cases of bowel malrotation associated with or without midgut volvulus. Asymptomatic malrotation referred for Ladd's procedure can be done laparoscopically using a three port technique. Ladd's bands and duodenocolic adhesions are divided exposing the SMA that lies between the

duodenum and ascending colon. The base of the mesentery root is widened using sharp dissection leaving the small bowel on the right abdomen and the colon on the left to prevent volvulus. The appendix is removed to avoid future diagnostic problems. Advantages of laparoscopy are: less pain, less ileus, brief hospital stay and better cosmesis. In cases of midgut volvulus laparoscopy is debatable since it may be difficult and dangerous to deal with dilated a/o ischemic bowel.

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Myofibromatosis

Myofibromatosis refers to a rare benign soft tissue tumor seen mostly in newborns and young infants. The child develops firm, discrete, flesh-colored to purple nodules in skin, muscle, bone a/o subcutaneous tissue with particular predilection for the head and neck region and trunk. Etiology is unknown. Microscopically, they are well-circumscribed nodules consisting of short bundles of plump, spindle-shaped cells displaying characteristics intermediate between fibroblasts and smooth muscle cells with central necrosis and a prominent vascular pattern. Clinically two types are described: solitary and multicentric (generalized) form. Most infants (74%) have a solitary lesions that respond to conservative surgical excision. The multicentric variant with a poorer prognosis may involve muscle, bone and viscera. Visceral lesions are associated with significant morbidity and mortality generally within the first few months of life secondary to obstruction of a vital organ (bowel and lung), failure to thrive, or infection. Spontaneous regression has been identified in one-third of the patients after a two-year period suggesting that multiple lesions not affecting vital function, resulting in growth anomalies, or demonstrating rapid aggressive growth can be managed conservatively.

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