



PEDIATRIC SURGERY Update © **Vol. 32 No. 01 JANUARY 2009**

Thyroid Nodules

Management of thyroid nodules in children should proceed well ordered since deviations in algorithm causes significant delay in diagnosis, morbidity and mortality in the face of a disease that is curable most of the time. Initially a child with a thyroid nodule should undergo blood sampling for T3, T4, TSH, thyroglobulin along with simple chest films to determine if he is euthyroid, hypo- or hyperthyroid. First imaging study that should be done is a neck ultrasound to determine if the nodule is solid, cystic or complex. If the child harbors a solid mass and is hyperthyroid a thyroid scan will help determine if the cause is an autonomous nodule or a completely enhancing gland. Otherwise next step in management is performing a fine needle aspiration (FNA) cytology. If the cyst disappears with aspiration a period of watchful follow-up is justified. The FNA will help determine if the child has a benign, probable or unmistakable malignant lesion. With a persistent benign lesion a period of watchful waiting or hemithyroidectomy if the lesion persists or grows is justified. A probable malignant lesion can be managed with hemithyroidectomy and completion thyroidectomy if the pathology comes malignant. An unmistakable malignant lesion should undergo total thyroidectomy with central node compartment dissection. With multicentricity, lymph node involvement, persistently high thyroglobulin levels, or distant metastasis ablation radioiodine is required.

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Stealth Surgery

Stealth surgery refers to endoscopic subcutaneous procedures performed relatively invasively without leaving any obvious evidence that an operation has occurred. The concept refers to excision of benign subcutaneous lesions of the head and neck in children using an incision in the axilla or through a hidden incision in the scalp. Most of these subcutaneous

lesions are approached directly on top of them usually using cosmetic skin creases to avoid an unsightly scar. In some cases the scarring could be displeasing to patient and family. Lesions include dermoid cysts, lymph node biopsy, thyroglossal duct cysts, ectopic dilated veins, small hemangiomas, cutting of the sternocleidomastoid muscle for torticollis, benign thyroid lobectomy and removal of parathyroid adenomas. The technique uses a laparoscope and two other trocars place near the axilla away from the lesion. The subcutaneous space is insufflated with carbon dioxide to expand and create a working space the same as is done during abdominal laparoscopic procedures. Procedures can be performed ambulatory. Beside excellent cosmetic results other advantages include magnified visualization of the anatomy and the lesions. Children whose lesions are suspected to be malignant, lymphangiomas, hemangiomas or involving the skin are excluded.

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Cystic Nephroma

Cystic nephroma (CF) is a very rare benign cystic renal neoplasm seen in both children and adults characterized by a solitary, well-circumscribed, multiseptate mass of non-communicating, fluid-filled loculi surrounded by a thick fibrous capsule compressing normal renal parenchyma. Etiology is unknown. CF is seen in patients older than 30 years with a male to female ratio of 1:8. The cyst can involve partially or completely the kidney, though CF is usually unilateral and occurs sporadically. The cysts may prolapse toward the renal pelvis causing urinary obstruction. Clinical signs include abdominal mass, abdominal or flank pain, hematuria, hypertension and urinary tract infection. The CT Scan is diagnostic showing a homogenous multiloculated cystic mass with capsule resembling a football. Differential diagnosis includes cystic Wilms tumor, multicystic renal dysplasia, cystic hamartoma and congenital mesoblastic nephroma. Operative intervention is indicated in all of these cases to establish diagnosis and procure treatment. Goals of surgery consist of eradication of all tumor tissue with preservation of as much renal tissue as possible. This can be accomplished with enucleation or partial nephrectomy. Histologic diagnosis is imperative before any adjuvant therapy is started. The localized form, when asymptomatic, can be managed more conservatively.

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