PEDIATRIC SURGERY *Update* ©
Vol 12 No 05 MAY 1999

'Official Publication of the Puerto Rico Association of Pediatric Surgeons'

Müllerian Inclusions

Inguinal hernia repair is the most common procedure performed in the pediatric age group. Unintentional vas deferens injury has been reported in as much as 1.5% of cases. Occasionally the pathologist will report glandular or epithelial like structure in hernial sac tissue. These müllerian inclusions remnants found in hernial sacs are a great cause of concern since they can resemble and be confused with segments of vas deferens or epididymis leading to the erroneous conclusion that a functional reproductive structure has been disrupted. Müllerian inclusions can be identified in 6% of hernial sacs, mostly in the prepubertal age child. These structure are lined by ciliated columnar epithelial and surrounded by a rim of condensed fibrous tissue of variable thickness. They arise from paratesticular embryonal remnants. They are usually one or two, rounded, embedded in fibrous connective tissue and associated with small blood vessels. Masson trichrome staining will show that the connective tissue of the inclusion is composed of fibroblasts without a smooth muscle component as seen in normal vas deferens. Size is another factor as the mean remnant diameter is 0.17 to 0.19 mm, and does not change significantly with age. Normal vas deferens diameter goes from 0.69 to 1.5 mm. If the microscopic evaluation reports vas deferens the possibility of surgical injury or duplication should be considered. This issue should be discuss with the family and later evaluation for infertility done.

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Stage III Neuroblastoma

Neuroblastoma (NB) in early stages of development (stage I & II) benefits from surgical excision. The role of surgery in the management of neuroblastoma stage III tumor (tumor infiltrating across the midline with or without lymph node involvement) is controversial. Many variables enter the formula of determining risk of disease, i.e., age, site, stage, N-myc status, DNA diploidy and Shimada classification to mention a few of the most

important. Some reports have independently found that stage III managed initially with chemotherapy and radiotherapy and is responding benefits from eventual complete tumor excision despite site, age or histology. Complete surgical excision as determine by free margin of tissue has a significant survival advantage overall. Preop chemotx converts a friable tumor into a firmer, more mature and easily resectable tumor. Surgical complications in advance stages are higher (bleeding, nephrectomy, adjacent organ removal, infection). Some have found that complete resection is not needed in biologically favorable children with NB less than one year of age. Biologically unfavorable patients one year of age or greater who undergo gross surgical resections has improved survival. Defining subgroups of patient with poor prognostic biologic markers and histology to decide whether surgery or bone marrow transplant is the next best option is pending trial randomization and study.

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Piriform Sinus

Congenital piriform sinus fistulas or cysts are a cause of acute/ recurrent suppurative thyroiditis or adenitis. Derived from the fourth pharyngeal pouch (ultimobranchial body), almost all occur on the left side of the neck. They present as a lateral cervical cyst or sinus anterior to the sternocleidomastoid muscle. The fistulae arises from the hypopharynx and end in or next to the thyroid lobe. Esophagoscopy can help visualized the pyriform orifice connected to the cyst. CT-Scan suggests the diagnosis. In the acute situation they may need incision and drainage to convert it into a draining sinus, followed later by excision. As cysts they should be removed completely. The side wall of the piriform sinus is opened with the help of a laryngoscope and the bottom part of the mucosa of the sinus transected with the internal orifice of the fistula, after which the fistula is removed en bloc. Histology will show thyroid or thymic tissue in the wall of the cyst.

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