



PEDIATRIC SURGERY *Update* ©

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Lymphangiomas - Fibrin Seal

Lymphangiomas are congenital cystic tumors developing in the neck, axilla, chest and trunk. Characteristically they are composed of multiple sacs or loculation of lymphatic fluid. Cysts can vary in size from microcysts to large cystlike dilatations. The tumor can compress vital structure. The close relation of this benign tumor with vital structures reduces the chances of complete surgical excision in many cases. This has brought forth the need for alternative therapy such as sclerotherapy. Two such agents in use today for sclerosing lymphangiomas are OK-432 and fibrin glue sealant. OK-432 has not yet been approved by FDA. In 1988 fibrin glue successfully sealed a postoperative persistent lymphatic drainage in a child after persistent drainage. Fibrin glue or sealant, an FDA approved product, consists of a mixture of fibrinogen, thrombin, a fibrinolysis inhibitor and calcium in separate vials. When mixed they form a viscous solution that sets into an elastic coagulum. Thrombin transforms fibrinogen into fibrin. The inhibitor prevents premature degradation of fibrin. Fibrin glue is adhesive, it is locally hemostatic and it regenerates tissue that favor the synthesis of collagen. The adhesive can effectively seal tissues surfaces and eliminate potential dead spaces. The technique for fibrin seal of lymphangiomas consists in percutaneous puncture of the cyst and aspiration of the whole content followed by introduction of fibrin sealant into the cavity. The amount injected consist of 10 to 15% of the suctioned volume. Treatment can be repeated. Results are very encouraging with few minor side effects such as erythema and cellulitis.

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Abdominal Incision

Pediatric surgeons utilize several types of abdominal incision to approach different surgical problems in newborns, infants and children. In most children and during the first five years of life transverse incisions are preferred. It has been demonstrated that the younger the child, the relatively larger the abdominal cavity and wall. Because of the anatomical differences between the abdomen of adults and small children, the cavity of the pediatric patient resembles a horizontally oriented ellipsoid. Being barrel-shaped a transverse incision provides better exposure to all four quadrants in young children. The younger the child, the larger proportionately is the costo-iliac space, allowing for easier lateral extension of the incision. In babies a supraumbilical transverse incision is ideal to explore all four quadrants and solve almost every surgical congenital abdominal condition. Another advantage of transverse incision over longitudinal incision is the low incidence of fascial dehiscence, hernia formation, and evisceration of transverse incisions. Whether to use mass fascial closure or layer closure no significant statistic difference in rate of complications has been identified in abdominal incisions in children. Finally, transverse closure carries better cosmetic results than vertical incision. In older children a midline incision is still the incision of choice in conditions that require rapid intra-abdominal entry such as trauma.

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Myoblastoma

Granular cell tumor (GCT), also known as myoblastoma, is a lesion of unknown etiology and histogenesis rarely found in children. GTC most commonly appear in the skin or soft tissue of the trunk and extremity during the life of a child. Other sites described includes the oral cavity (tongue, gingiva, trachea, larynx), esophagus, breast, perineum and parotid gland. A preference for the Negro race has been identified in several series. Most GCT are benign single lesions. A few patients develop multiple benign lesions. GCT tends to recur locally. The cytopathologic features of GCT are distinctive enough to allow a correct diagnosis using FNA cytology. The malignant variant of granular cell tumor is a high-grade sarcoma with a high rate of metastases and a short survival. Management of benign GCT consists of local excision leaving margins free of tumor. Very rarely GCT has been reported to metastasize to the lung.

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* Edited by: **Humberto Lugo-Vicente, MD, FACS, FAAP**

Professor /Academic Director of Pediatric Surgery, University of Puerto Rico - School of Medicine,
Rio Piedras, Puerto Rico.

Address: P.O. Box 10426, Caparra Heights Station, San Juan, Puerto Rico USA 00922-0426.

Tel (787)-786-3495 Fax (787)-720-6103 E-mail: *titolugo@coqui.net*

Internet: <http://home.coqui.net/titolugo>

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