



PEDIATRIC SURGERY Update © **Vol. 37 No. 05 NOVEMBER 2011**

Chest Wall Tumors

Primary chest wall tumors (PCWT) in children are rare, with the majority being malignant. They originate from the skeletal chest wall or surrounding soft tissue. Benign chest wall tumors consist of osteochondroma, lipoblastoma, osteoblastoma bone cyst and eosinophilic granuloma. Resection provides cure in most cases. Malignant PCWT includes primitive neuroectodermal tumor (formerly Ewing's sarcoma), rhabdomyosarcoma, chondrosarcoma, neuroblastoma, leiomyosarcoma, fibrosarcoma and osteogenic sarcoma. Both leukemia and lymphoma can present as chest wall masses. Diagnosis of PCWT includes simple chest film, CT Scan and MRI studies. An initial biopsy by either core-needle or open is warranted since many of these tumors are amenable to preoperative adjuvant therapy. Those tumors that respond to preop chemotherapy will make later chest wall resection less morbid and more feasible. During resection of the tumor the surgeon should open one to two interspace higher and away from the primary rib involved. Negative microscopic margins are required for malignant tumors when feasible. To avoid paradoxical motion of the rib after resection of two or more ribs, rigid chest reconstruction with mesh is needed. Methylmethacrylate cement sandwich between two layers of polypropylene mesh produces this effect very well. The mesh should extend over the edge of the rigid part of the sandwich to allow suturing with non-absorbable material. Complications include recurrence, respiratory insufficiency, scoliosis and chest wall deformity. In general prognosis is good.

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Pancreatic Abscess

A pancreatic abscess is a localized collection of purulent material with little or no

necrosis in the region of the pancreas which is delineated by a wall of collagen and granulation tissue. It is also known as walled-off pancreatic necrosis (WOPN). In contrast, an infected pancreatic pseudocyst is a localized collection of infected fluid in the region of the pancreas, and like an abscess is also walled off by a membrane of collagen and granulation tissue. Both conditions are seen as complications after acute pancreatitis. The child develops abdominal pain, fever and leukocytosis. Blood cultures are positive. The degree of enzyme elevations does not correlate with the degree of necrosis. The presence of air in necrotic tissue in a pseudocyst is specific for infection. The diagnosis is established with contrast enhanced CT-Scan. Management consists of systemic antibiotics, bowel rest, gastric suction and enteral nutrition. Primary drainage is the treatment of choice for a wall-off pancreatic necrosis. Endoscopic ultrasound with transgastric drainage is another option. WOPN can lead to several complications such as fistula formation, recurrent pancreatitis, bowel obstruction or death. Acute surgery may be needed in cases of perforation, major bleeding or when the child is not responding to therapy.

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Pyogenic Granuloma

Pyogenic granuloma, also known as lobular capillary hemangioma, is a common benign acquired vascular lesion of the skin and mucous membranes in the pediatric age group. Mean age of presentation is six years with most cases being males. Mean lesional size is 6.5 mm. Pyogenic granulomas are rapidly developing vascular nodules characterized by an erythematous, dome-shaped papule that bleeds easily most commonly located in the head and neck area, followed by trunk, upper extremity and lower extremity. The etiology of pyogenic granuloma is unknown, but proposed agents include trauma, infection, and preceding dermatoses. The preponderance of pyogenic granulomas occurs in the skin (80%), with the remaining ones in the oral cavity and conjunctiva. Most lesions are effectively managed with full-thickness skin excision and linear closure. Another alternative is shave excision followed by laser photocoagulation or cryotherapy. Topical Imiquimod 5% cream has also been used. Shaving and cream therapy has a

higher recurrence rate.

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

Professor of Pediatric Surgery, University of Puerto Rico - School of Medicine,
Rio Piedras, Puerto Rico. Director - Pediatric Surgery, San Jorge Childrens Hospital.
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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