Pyomyositis

Pyomyositis is a purulent infection of skeletal muscle commonly seen in children who live in tropical countries. For pyomyositis to develop initial muscle injury followed by bacteremia must coexist. The initial traumatic event causes a localized cutaneous infection which is the source of the bacteremia that seeds the injured muscle tissue. Pyomyositis is more common in males, especially those who participate in strenuous physical activity. Peak incidence occurs between two and five years of age in children. Associated conditions (60%) includes diabetes, liver disease and HIV. Clinically, pyomyositis is accompanied by abscess formation in the suppurative phase (fluctuance) but may be without a focal fluid collection in the presuppurative phase (pain, fever, cellulitis, indurated muscle). Most common sites of abscess formation are the quadriceps and gluteal muscles. Organisms more commonly associated with pyomyositis are Staphylococcal Aureus which affects 90% of cases and streptococcus species. MRI is the most accurate means of diagnosing a lesion within muscle determining location and extension of the lesion. Initial management consists of systemic antibiotics. Surgical drainage and debridement are of paramount importance in the management of pyomyositis. All specimens obtained by aspiration or drainage should be cultured for aerobic and anaerobic bacteria. In immunocompromised patients progression to the septicemic stage is associated with high morbidity and mortality.

References:

Congenital Tracheal Stenosis

Congenital tracheal stenosis (CTS) is a rare condition seen immediately after birth or in early infancy that is uniformly life-threatening. Infants with CTS presents with stridor, respiratory distress, recurrent pulmonary infections or failure to thrive. Inflammation of the mucosa or mucous accumulation can easily obstruct the already stenotic airway. The
stenosis includes a short or long segment of circular cartilaginous ring. Diagnosis is established using bronchoscopy, MRI (assessment of vascular structures and relation to the stenosis), or CT-scan (good anatomic delineation of the airway). Each individual malformation is studied using rigid tracheo-broncho-esophagoscopy. Associated cardiac defects should rule out with echocardiogram. Management of CTS is surgical. Selection of the type of treatment depends on the patient’s clinical status and the anatomic pattern of the stenosis. Resection of a short stenosis with anastomosis can be possible with a length that does not exceed half of the trachea. For longer stenosis the most useful technique consists of enlargement tracheoplasty with cartilaginous or a pericardial graft or the more recent and slide-tracheoplasty. The latter technique is preferable because it preserves native tracheal tissue with fewer postop complications. For CTS one should always look for other associated thoracic malformations, such as a pulmonary sling which may compromise the results of the surgical correction of the tracheal stenosis. Best prognosis is obtained with simultaneous correction of the respiratory and cardiovascular malformation. Overall survival of these children is 75%.

References:

Aplasia Cutis Congenita

Congenital absence of skin, better known as Aplasia Cutis Congenita (ACC) is a rare birth malformation characterized by partial or full-thickness absence extending through the underlying tissues in a localized manner. Sites involve in ACC include most commonly the vertex of the scalp region (85%) followed by truncal and extremity skin areas. In the scalp the lesion can include the dura with brain exposure. Life threatening hemorrhage from the sagittal sinus or sepsis may occur if closure is delayed. Most affected children with ACC are normal. Pathogenesis is not clear. A few are associated with other malformations such as omphalocele, absence of distal limbs and cleft deformities. The majority of these lesions are single and less than two centimeters in diameter. Management of ACC is conservative for small lesions with excision and primary closure. A larger lesion might need split-thickness skin grafting or tissue expansion technique for closure.
References: