

# *Most Common Complications in Pediatric ORL*

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The first principle when a child presents with an infectious Ear Nose and Throat (ENT) complication is that hospitalization is required for its diagnosis and proper treatment. We will discuss which patients should be admitted in the hospital when complications are present.

In cases of acute follicular tonsillitis, there are both non-infectious and infectious complications. The non-infectious complications include glomerulonephritis and rheumatic fever, easily diagnosed by pediatricians. The infectious complications include peritonsillitis phlegmonous, which will be present in children with severe dysphagia, fever and pain. Phlegmonous peritonsillar and the peritonsillar abscess are very rare among children under two, but are much more common in children older than 4-5 years of age.

In our experience, a phlegmonous retropharyngeal abscess as complication of tonsillitis is more common than a peritonsillar abscess in children under 2-3 years. In children presenting with dysphagia, fever and sore throat, a retropharyngeal abscess due to foreign body must be considered, but it can also be caused by an untreated acute tonsillitis. Another complication can be an abscess of the pharyngomaxillary space that should be incised and drained. CT scan and MRI can be helpful for making the diagnosis.

A child presenting with a visceral vascular space (carotid bundle space) cellulitis requires urgent treatment, as there is a risk of carotid artery rupture. The physical exam may reveal deep induration to the sternocleidomastoid, torticollis toward the opposite side, fever and pain. If septicemia is present, internal jugular vein thrombosis should be suspected. The initial treatment is intravenous infusion of antibiotics, fluids and cortico-steroids. If no improvement occurs within 72 hours, incision and drainage are required. Ligation of the jugular vein is advised if a thrombus is found.

Another complication of sinusitis is orbital cellulitis, which manifests as lid edema, exophthalmus, pain and fever. A preseptal abscess can be derived from ethmoiditis. Some of these patients may also have dacryocystitis.

An ethmoidal subperiosteal abscess may cause inflammation of the surrounding adipose tissue. These patients may present with exophthalmos and limited ocular motility. The treatment relies on intravenous antibiotics and usually minimally invasive endoscopic functional surgery. If not diagnosed, this pathology can lead to cavernous sinus thrombosis, which has a 30% mortality rate.

It is important to check the pupillary reflex and ocular motility. Frontal sinusitis

in children more commonly has intracranial complications when compared to ethmoidal and maxillary sinusitis. Other complications can occur intratemporally and intracranially. The intratemporal complications can be caused by necrotizing otitis externa or opportunistic infections, usually presenting with chronic diarrhea and repetitive bronchopneumonia. The etiology for necrotizing external otitis is *Pseudomonas aeruginosa*, but *Aspergillus fumigatum* must be considered in AIDS patients if there is granulation in the external auditory canal, exposed cartilage or pain and facial paralysis. This kind of otitis is more frequent in the diabetic adults than in children, but can occur in malnourished individuals.

If a malnourished child presents with otorrhea, a lesion in the external auditory conduit (granulation tissue or exposed cartilage) and facial paralysis, the diagnosis of otitis externa should be strongly considered.

Another intratemporal complication is mastoiditis, which presents with swelling in the mastoid region with loss of the retroauricular sulcus, causing forward displacement of the pinna. These children usually present in a toxic state. Treatment is drainage and surgery.

If facial paralysis is present in a child with otitis media, the diagnosis of facial nerve dehiscence should be considered. The facial nerve is affected by the inflammatory reaction as well toxins from the bacterial activity.

It is important to note that children who present with behavioral changes and intermittent headaches may have an underlying otic cerebral abscess. These children are not necessarily in a coma and may present with migraine, fever and walking dysfunctions can be the symptoms, as well as projectile vomiting. In one such case the patient had to undergo neurosurgical placement of a peritoneal shunt for the treatment of intracranial hypertension caused by the abscess

### **Recommended readings**

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