

## Parotitis

### Key Points:

1. In unilateral parotitis, consider a bacterial infection, local obstruction, or malignancy.
2. High fevers and a toxic appearance can develop in bacterial parotitis and should be considered in the elderly, dehydrated, and malnourished patients.
3. History and physical should lead you towards a cause. Biopsy may be necessary, especially if you see facial nerve paralysis.

*A little anatomy...* The parotid glands sit in the pre-auricular area over the angle of the jaw and drain their salivary juices through Stenson's ducts which arise near the 3<sup>rd</sup> and 13<sup>th</sup> molars. The facial nerve (Nerve VII) passes through the gland.

### *Unilateral enlargement of the gland*

#### **I. Infectious parotitis**

- Typical organisms are *S. aureus* and oral flora. *Eikenella corrodens*, enterobacteriaceae, and Gram negative bacilli have been isolated.
- Most often seen in the elderly and in patients who are dehydrated, malnourished, or intubated
- Clinical presentation: Usually sudden onset of pain and local swelling over the parotid gland. Can see trismus and dysphagia. High fever, chills, and a toxic appearance are common.
- Physical exam rarely yields fluctuance but looking for pus draining from an expressed parotid gland is important.
- Diagnosis is made on history and attempts to culture expressed material from gland
- Treatment is with antibiotics and hydration. Watch for extension into neck which could lead to pharyngeal obstruction, osteomyelitis, and sepsis.

II. **Obstruction:** can be from stone in Stenson's duct. This can lead to a chronic sialadenitis.

#### **III. Malignancy**

- Risk factors: Unclear. Seems to be an association prior irradiation and possibly EBV. Smoking and alcohol, interestingly, do not appear to offer increased risk unlike other head and neck cancers.
- Histopathology: Many different types but mucoepidermoid and adenoid cystic are the most common.
- Clinical presentation: Often presents as a slow growing mass. Facial nerve palsy, if it occurs, gives a high probability of malignancy.
- Diagnosis is made by biopsy with sampling of jugular chain lymph nodes
- Treatment: Parotidectomy with facial nerve sparing can be performed for local tumors. For more extensive disease may need a modified radical neck dissection.
- In addition to surgery, radiation therapy is used for more extensive cancers and chemotherapy is reserved for metastatic and unresectable tumors.

### *Bilateral swelling*

#### **I. Infectious**

- Mumps: Infection begins with fever, malaise, anorexia, and headache. 48 hours later parotitis develops. Of note, though, it occurs in only 30-40% of mumps infections and can be unilateral. Orchitis, encephalitis, or meningitis can occur without parotitis.
- EBV, CMV, coxsackie A, and other viral infections
- TB rears its ugly head again!
- Others: leprosy, HIV

#### **II. Infiltrative**

- Sjogren's syndrome: Salivary gland enlargement occurs in up to 50% of pts with Sjogrens and may be episodic or chronic. The glands are usually painless.
- Amyloidosis

### III. **Granulomatous**

- Sarcoid: Less than 6% of pts will have parotid swelling, usually painful. If seen with facial palsy and anterior uveitis, it's called Heerfordt's syndrome.

### IV. *And a bunch of others....*

In certain populations, such as teenage girls, consider anorexia and induced vomiting as a cause. A few other randoms include hyperlipidemia, cirrhosis and alcoholism, and acromegaly.

*So now that I've learned about all of these causes, what do I do now?*

Do a thorough history and physical. Fever and tender parotid glands are more likely to be an infectious cause. Consider parotid biopsy if no obvious etiology can be found. This is especially true if you have facial nerve palsy. Treatment will depend upon the cause.