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Oral Surgery II

**University of Jordan**

**Faculty of Dentistry**

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Hand Out

Slide

* Sheet

Designed by: Hind Alabbadi

Salivary Gland tumor

* Complications of salivary gland surgery:

Complications are related to the site, we should worry the patient before starting the surgery   
**1.Facial nerve** (Motor) is very important.   
Facial nerve trunk supplies some muscles (posterior belly of digastric, stylohyoid muscles…) the it gives two divisions; upper and lower, the lower one gives: cervical, marginal mandibular and buccal. The upper one gives zygomatic and temporal.   
So any of these branches could be involved, the most important thing here is to tell the patient that he might have weakness at the angle of the mouth, second, he might have problem in eye closure, leading to eye dryness, ulcer, Keratoconjunctivitis. Buccal and cervical branches don’t result in serious complications.

Even in benign tumors, we dissect the superficial gland, we have to see the nerve, touch it, and isolate it from the gland, so the possibility in weakness in any of these branches is high.

<>Facial nerve symptoms differ according to the site of damage, if peripherally; the specific branch will be affected. If centrally; only the lower part will be affected because of decussation.  
usually in surgery, we might induce lower motor-neuron lesion<>

**2. Salivary fistula:**   
the surgeon might induce rupture in the salivary gland tissue, leading to leak of saliva. Treated by excise and close.

**3. Mucocele:** Retention of saliva and swelling formation.

**4. Frey’s syndrome:**Sweating and redness when the patient is eating instead of salivation.  
How?? O.o

Acetylcholine is the neurotransmitter in the parasympathetic system and Adrenaline is the one in the sympathetic system. Sweat gland is activated by the sympathetic system, theoretically; when the surgeon did the incision, he induce connection between the sympathetic nerve fiber of sweat gland and the salivary tissue, so when the patient eats, the parasympathetic impulse (releasing Acetycholine) is connected to the sweat gland, induce sweating because the acetylcholine is the only neurotransmitter responsible for activation of sweat gland.

Management of these patients either by anti-prespirent, douderant and one of the good treatment modality is the Botox, since it works on Acetylcholine receptors so it might suppress the function of sweat gland.

**\*\*Malignant Tumors:**

They are rare; the most common one is mucoepidermoid carcinoma.

Perinural invasion -Alarming sign:O- the malignant cells can travel through the nerve sheath reaching distant area like the brain, so the removal of the tumor itself with safety margin is not enough.  
30% of those tumors presented with nerve involvement (facial nerve), this doesn’t mean that every malignant tumor must have nerve involvement.

They are growing rapidly, have deep fixation, invading deep muscles and all structures around it,

Overlying skin may have redness and ulceration

A 70 year patient presented with very huge tumor in the palate for about 10 years, this is an indication of benign tumor.

\*\*Protocols for treatment:  
-Surgery

-Radiotherapy

-Combined; surgery and radiotherapy

-Chemotherapy

~~Case 1:

A patient presented with a large swelling in the floor of the mouth, MRI was taken: coronal section showing radiopaque mass involving the sublingual gland ( In MRI the bony structures appeared black and the soft tissue appeared white), they took a biopsy and it was a malignant tumor( we can take a biopsy here since it’s intraorally), Removal of this tumor with safety margin and neck dissection.  
**Important structures:**

@~Intraoral approach we can see **the lingual nerve,** descending from the ganglia, attached to the submandibual gland, goes outside the oral cavity from underneath and then it goes up and lateral to the tongue and supplies the floor of the mouth and the tongue.

((It runs deep to the lateral pterygoid muscle parallel to the inferior alveolar nerve, lying anterior and medial to it. It then runs between the internal and medial pterygoid muscles and passes obliquely over the superior pharyngeal constrictor and styloglossus muscles before approaching the side of the tongue.))\*\*Medscape.com \*\*

@~**Submandibular duct** it is attached to the submandibular gland, it goes inside the mouth, gives many branches connected to the sublingual gland and opens in the floor of the mouth, so here we have to isolate the duct from the sublingual tissue.

When doing neck dissection we also remove the submandibular gland, because there are mant lymph nodes attached to it.

Histological appearance: low grade tumor, no evidence of perinural invasion.

Follow of of 7 years with no recurrence.

~~Case 2:

A patient presented with isolated lump in front of the ear, near the parotid gland, redness of the skin and elevation of the ear. He visited many doctors, treated with antifungals…. And one of the doctor excise the lump extraorally!!!

MRI was taken, showing a lump inside the parotid gland, the patient needed superficial parodectomy. External incision (Y-type) around the ear, going down to the neck, elevation of the skin, removes the gland and identify the facial nerve branches.

Post-operative pictures: the patient can smile ‘’no drooping at the angle of the mouth’’ and eye closure is normal.

~~Case 3:

A patient presented with a lump in the cheek and has limitation in mouth opening, affecting the minor salivary gland. We took a biopsy and it was adenoid cystic carcinoma –Malignant tumor may have perinural invasion--, limitation in mouth opening means involving the masticatory muscles. lymph node involvement and metastatic in the neck.

The tumor involved a good thickness of the cheek and it was stage 4, so we have to remove it with safety margin 4-5cm, we have to remove all of the skin and mucosa of the cheek, posteriorly, we have to remove from the ramus and parts of the maxilla, and also we need neck dissection.

The patient refused to remove the skin of the cheek. The best approach is extraorally is weber ferguson, elevate the face, reach the tumor and remove it, leave the skin of the cheek, neck dissection. In the reconstruction we rotate the temporalis muscle with its blood supply and we suture it with the cheek, the patient lived for 7 years and he died due to recurrence.

~~Case 4:

A patient with huge lump inside the submandibular gland, we remove it before 2years and it reoccurs a year ago and we remove it totally.

**“You deserve to see your dreams come true…**

**congratulationssssss Dentists ‘’**