**INFRATEMPORAL FOSSA**

**Learning objectives:**

• **At the end of the lecture the student should be able to know:**

• **Infratemporal fossa**

• **Boundaries of infratemporal fossa.**

• **Contents of infratemporal fossa.**

* **Infratemporal fossa**

An irregularly shaped cavity behind the maxilla, situated below and medial to the zygomatic arch. Infratemporal fossa lies below the infratemporal crest on the greater wing of the sphenoid.

 **Boundaries:**

* **Medially**: lateral pterygoid plate of sphenoid bone.
* **Laterally**: The ramus of the mandible.
* **Anteriorly**: The posterior surface of the maxilla.
* **Posteriorly**: The styloid process of the temporal bone .
* **Superior**: Greater wing of the sphenoid below the infratemporal crest, and by the under surface of the temporal squama.
* **Floor** is formed by the Medial pterygoid muscle.

**Communications:**

• **At the anterior end of the medial wall** “in front of the pterygoid process” the pterygomaxillary fissure communicates it with the pterygo-palatine fossa.

• **At the upper end of the anterior wall** “above the maxilla” the inferior orbital fissure communicates it with the orbit.

• **At the lateral end of the anterior wall** the space between the maxilla medially and the ramus of the mandible laterally communicates with the buccal space above and the sublingual space below.

• **At the lateral end of the roof** ‘the space between the infratemporal crest medially and the zygomatic arch laterally” communicates it with the temporal fossa.

• **At the roof the** foramen ovale and foramen spinosum communicate it with the middle cranial fossa.

• **The posterior boundary** is continuous with the post-styloid compartment of the parapharyngeal space containing the styloid apparatus and the carotid sheath.

**Contents:**

* **Muscles:**
1. Lower part of temporalis.
2. Lateral and medial pterygoid**.**
* **Vessel:** Maxillary artery originating from the external carotid artery and its branches.
* **Veins:** Pterygoid venous plexus.
* **Nerves:**
1. Mandibular nerve.
2. – Inferior alveolar nerve
3. – Lingual nerve
4. – Buccal nerve
5. Chorda tympani nerve.
6. – Otic ganglion.

**General arrangement** of the structures in the fossa:

From superficial “lateral” to deep “medial’:

1. **Ramus of the mandible**.
2. **Lateral pterygoid muscle** above with the **buccal branch** of the mandibular nerve and **maxillary artery** emerging between its two heads, the **lingual and inferior alveolar** branches of the mandibular nerve lower down on the surface of the medial pterygoid muscle.
3. Deep to the lateral pterygoid muscle the mandibular nerve gives the two roots of the **auriculotemporal n**erve which pass backwards then unite together to form the nerve that winds medial then posterior to the neck of the mandible to reach the superior pole of the parotid gland.
4. **Otic ganglion** between the mandibular nerve and the tensor palate muscle.
5. **Pterygoid plexus** of veins are on either side and inside the lateral pterygoid muscle.
6. **Maxillary artery** enters the fossa between the necks of the mandible laterally and the **sphenomandibular ligament** medially with the auriculotemporal nerve above, then the artery passes forwards at the lower edge of the lateral pterygoid muscle then dips between its two heads to enter the pterygo-maxillary fissure. The artery has a variable relation to the lower head of the muscle; either deep or superficial.

**The end**