TONGUE-II

Presented by :- Dr. Sushma Tomar
Associate Professor
Department of Anatomy

28-4-2020
Lesson Plan

❖ Intrinsic Muscles of Tongue

❖ Arterial supply

❖ Venous drainage

❖ Lymphatic drainage

❖ Nerve supply

❖ Applied aspects
Intrinsic Muscles

- Run in three directions:
  - Longitudinal.
  - Horizontal (Transverse).
  - Vertical.
- Occupy the upper part of the tongue.
- Attached to the submucosa and to the median fibrous septum.
- There are 4 intrinsic muscles in each half of the tongue:
  - Superior longitudinal
  - Inferior longitudinal
  - Transverse
  - Vertical.
Intrinsic Muscles contd...

Superior longitudinal-

Location-
• Beneath the mucosa.

Actions-
• Shortens the tongue.
• Makes the dorsum concave.

Inferior longitudinal-

Location-
• Close to inferior surface, between Genioglossus and Hyoglossus.

Actions-
• Shortens the tongue.
• Makes the dorsum convex.
Intrinsic Muscles contd...

**Transverse**

**Location**
- Extends from median septum to the margin.

**Actions**
- Makes the tongue narrow and elongated.

**Vertical**

**Location**
- At the border of anterior part of tongue.

**Actions**
- Makes the tongue broad and flattened.
Arterial Supply

- Lingual artery.
- Facial artery.
- Ascending pharyngeal artery.

**Lingual artery:**
- Deep lingual arteries - to anterior part.
- Dorsal lingual arteries - to posterior part.

**Facial artery:**
- Tonsillar branch.
Venous Drainage

- Deep lingual vein.
- Vanae comitantes accompanying lingual artery.
- Vanae comitantes accompanying hypoglossal nerve.

**Deep lingual vein:**
- Principal vein of the tongue.
- Visible on inferior surface of tongue, near the median plane.

**Vanae comitantes accompanying lingual artery:**
- Joined by dorsal lingual veins.
Lymphatic Drainage

- Lymphatics are grouped into 4 sets:
  - Apical.
  - Marginal.
  - Central.
  - Basal [Dorsal].

Apical lymphatics drain:
- Tip.
- Inferior surface.

Marginal lymphatics drain:
- Marginal portions of anterior 2/3rd of tongue.
  - [Submandibular → Lower Deep Cervical]

Central lymphatics drain:
- Central portions of anterior 2/3rd of tongue
  - [Deep Cervical] Bilaterally

Basal lymphatics drain:
- Root of tongue.
  - [Upper Deep Cervical] Bilaterally
Nerve Supply

Motor Supply-
- All muscles of tongue are supplied by Hypoglossal Nerve except Palatoglossus.
- Palatoglossus is supplied by cranial root of Accessory Nerve.

Sensory Supply-
Anterior 2/3rd –
General Sensations- Lingual Nerve
Special Sensations of Taste- Chorda Tympani Nerve [except circumvallate papillae which are supplied by Glossopharyngeal Nerve.

Posterior 2/3rd –
General Sensations & Special Sensations of Taste- Glossopharyngeal Nerve.

Posterior-most part- Internal Laryngeal Nerve.
Applied Aspects

Unilateral paralysis of Tongue:

• Ipsilateral deviation of tongue.
• Action of Genioglossus muscle is used for clinical testing of Hypoglossal Nerve.
• Unilateral contraction of Genioglossus deviates the tongue to the opposite side.
Thank You