Cervical Plexus

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Introduction

- A nerve plexus is a network of interwoven nerves.

- Cervical plexus provides nerves to:
  - Head.
  - Neck and Shoulder.
  - Supplies skin and muscles of neck and thoraco-abdominal diaphragm.
• It is a plexus of loops.

• Formed from the **anterior rami of the first four cervical nerves** (C1-C4).

• Lies beneath the **prevertebral fascia** on the **scalenus medius** and **levator scapulae**, and under cover of sternocleidomastoid.
Formation of Cervical Plexus

• Each formative ramus divides into upper and lower branches, except the first cervical.

• C1 joins with the upper branch of C2.

U- Upper Branch, L- Lower Branch
Branches Of Cervical Plexus

SUPERFICIAL BRANCHES: 4 cutaneous branches:
- Provides cutaneous innervation to head, neck, and shoulder area.
- 3 ascending branches and 1 descending branch.
- Arise from near the middle of posterior border of sternocleidomastoid.

Ascending Branches:-
- Lesser Occipital Nerve (C2)
- Greater Auricular Nerve (C2 & C3)
- Transverse Cutaneous Nerve (C2 & C3)

Descending Branch:-
- Supraclavicular Nerve (C3 & C4)

sa- spinal accessory, lo- lesser occipital, ga- greater auricular, tc- transverse cutaneous, sc- supraclavicular, SCM- Sternocleidomastoid
Image showing dermatomes of cutaneous branches of cervical plexus
Branches of Cervical Plexus Contd…

**DEEP BRANCHES:** *Muscular* branches.
- Divide into medial and lateral series.

**Medial Series:**

1. Nerve to Rectus capitis lateralis (C1)
2. Nerve to Rectus capitis anterior (C1, C2)
3. Nerve to Longus capitis (C1-C4)
4. Nerve to Longus colli (C2-C4)
5. Inferior root of ansa cervicalis (C2, C3)
6. Phrenic nerve (C3, C4, C5)  
   *see image of 5th slide*
Deep Branches of Cervical Plexus Contd...

Lateral Series:- Nerve to

- Sternocleidomastoid (C2)
- Trapezius (C3 & C4)
- Levator scapulae (C3 & C4)
- Scalenus medius (C3 & C4)
- Scalenus anterior (C4)
Communicating Branches of Cervical Plexus

With Superior Cervical sympathetic Ganglion:

- All formative rami of cervical plexus receives grey rami communicans from superior cervical sympathetic ganglion.
Communicating Branches of Cervical Plexus Contd...

**With Hypoglossal Nerve:**

- A branch from the loop between C1 & C2 joins the hypoglossal nerve.

- After a short course with the hypoglossal nerve, leaves that nerve as:
  - Meningeal branch.
  - Superior root of ansa cervicalis (descends hypoglossi).
  - Nerve to Thyrohyoid (C1)
  - Nerve to Geniohyoid (C1)
Phrenic Nerve (C3, C4 & C5)

• Descends through the neck and thorax to **supply the diaphragm**.

• It lies on the scalenus anterior muscle and enters the thorax between subclavian artery and subclavian vein.

• **Only motor nerve to the diaphragm.**