IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Study Of "Occipital Triangle Of Neck" In Human Anatomy And Its Importance -A Literature Review."

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Abstract:

Occipital triangle of neck**:**

The occipital triangle is located in the superior part of the posterior cervical triangle. The anterior and posterior borders of this triangle are the same as those of the posterior cervical triangle, but the inferior border is the inferior belly of the omohyoid. Its floor consists of the levator scapulae, splenius capitis, and middle and posterior scalene muscles. The semispinalis capitis muscle is sometimes observed at the apex as

well as occipital lymph nodes. The triangle is bounded by the superficial and deep layers of the deep cervical fascia

The occipital triangle contains within its floor vertebral muscles enclosed by the prevertebral fascia. Within these muscles the cervical plexus forms. More superficially the trunks of the brachial plexus, the accessory nerve (cranial nerve XI) and the external jugular vein can be found.

This article focuses on Occipital triangle of neck in human anatomy and its importance in anatomy.

Key words: Occipital triangle of neck, Anatomy.

Introduction:

Occipital triangle of neck: Definition:

The occipital triangle is a space in the posterior (back) part of the neck, superior to the subclavian triangle, bounded by the sternocleidomastoid, trapezius, and omohyoid muscles, and containing structures like the spinal accessory nerve and branches of the cervical plexus.[1]

The **occipital triangle**, the larger division of the posterior triangle, is bounded, in front, by the Sternocleidomastoideus; behind, by the Trapezius; below, by the Omohyoideus.

Its floor is formed from above downward by the Splenius capitis, Levator scapulæ, and the Scalenus medius and posterior.

It is covered by the skin, the superficial and deep fasciæ, and by the Platysma below. [2]

The anterior and posterior margins of the occipital triangle are the same as those of the posterior triangle. However, its base (inferior border) is now formed by the superior margin of the inferior belly of the omohyoid muscle.[3]

Objectives:

To study the anatomy of Occipital triangle of neck and its applied anatomy.

Methods:

Literature Review Method.

Key facts about Occipital triangle of neck.

SN	Parameter	Spcifications
1	Type	It is type of posterior triangle.
2	Borders	Anterior - posterior margin of sternocleidomastoid muscle Posterior - anterior margin of trapezius muscle Inferior - inferior belly of omohyoid muscle
3	Content	Accessory nerve (CN XI), branches of the cervical plexus, upper most part of brachial plexus, supraclavicular nerve
4	Functions	As a space that houses important structures like the vertebral muscles, cervical plexus, trunks of the brachial plexus, accessory nerve (cranial nerve XI), and the external jugular vein, all vital for head and neck functions
5	Blood supply	Receives its blood supply primarily from branches of the external carotid artery, including the occipital artery, and the subclavian artery.

Structure: [4] The occipital triangle, a subdivision of the posterior triangle of the neck, is bounded anteriorly by the sternocleidomastoid, posteriorly by the trapezius, and inferiorly by the omohyoid muscle, with its floor formed by muscles like levator scapulae, splenius capitis, and scalenes.

Contents:[5]

- **Nerves:**
  - Spinal accessory nerve (cranial nerve XI).
  - Branches of the cervical plexus (cutaneous and muscular).
  - Supraclavicular nerves.
  - Transverse cervical artery and vein.
  - Part of the brachial plexus

Vessels:

a. Transverse cervical artery and vein.
b. External jugular vein

Lymph nodes:

a. Accessory lymph nodes
b. Inferior deep lateral cervical lymph nodes

Functions:[6]

The occipital triangle, a region in the posterior neck, houses vital structures and functions to organize the neck's anatomy, including nerves, blood vessels, and lymphatics.

Discussion:

- **Clinical significance**

A lot of nerves pass through the occipital triangle. It houses major nerves that innervate muscles vital for head and neck functions**.**[7]

The **occipital triangle** is one of the paired triangles in the posterior triangle of the neck. The triangles of the neck are surgically focused. [8]

Structural Support:[9]

The neck muscles, including those within the occipital triangle, support the skull and allow for head and neck movement.

Nerve Innervation:[10]

The occipital triangle houses nerves that innervate muscles vital for head and neck function

- **Vessels:** Vessels in the posterior neck triangle, including the external jugular vein, are harvested for use in plastic and reconstructive flap cases.
- **Lymph Nodes:** Lymph nodes in the posterior neck triangle are common areas of metastasis from head and neck cancers and are routinely dissected in surgical cases.
- **Cervical Plexus Nerve Block:** A cervical plexus block can be used for anesthesia of the neck area, with local anesthetic injected along the posterior border of the sternocleidomastoid at the junction of its superior and middle thirds, where the cutaneous branches of the cervical plexus emerge

Conclusions:

1. Knowledge of the occipital triangle, a subdivision of the posterior triangle of the neck is useful to avoid unnecessary exposure or damage to critical anatomical structures.
2. The occipital triangle is surgically important due to its rich neurovascular content, including the spinal accessory nerve (CN XI), vertebral artery, and brachial plexus.
3. It houses major nerves that innervate muscles vital for head and neck functions.

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