

REVIEWER'S REPORT

Manuscript No.: IJAR-52057

Date: 04-06-2025

Title: Morphometric Analysis of Hypoglossal canal and its topographical relationship with adjacent structures in North Indian dry skulls □

Recommendation:

Accept as it is.....**YES**.....

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		√		
Techn. Quality			√	
Clarity			√	
Significance			√	

Reviewer's Name: Dr Aamina

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)

Reviewer's Comment / Report

General Overview:

The manuscript presents a morphometric study of the hypoglossal canal (HC) with emphasis on its anatomical measurements and spatial relationship to adjacent cranial landmarks, specifically the occipital condyle and foramen magnum, using dry skulls from a North Indian population. The study contributes valuable anatomical data relevant to surgical approaches involving the craniovertebral junction.

Abstract Evaluation:

The abstract is clear and concise, effectively summarizing the background, aims, methodology, key quantitative results, and clinical relevance. It provides sufficient detail on measurement parameters and highlights the significance of the findings for surgical interventions.

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Introduction Evaluation:

The introduction offers a comprehensive background on the anatomy and clinical significance of the hypoglossal canal. It appropriately situates the HC within cranial anatomy and surgical contexts, such as the transcondylar approach. The rationale for focusing on morphometric data in a regional population is implicit, setting the stage for the study objectives.

Materials and Methods:

The methodology is adequately described, with clear mention of sample size (50 adult dry skulls), regional specificity (North Indian), and measurement tools (digital Vernier caliper). The choice of measured parameters—including vertical and transverse diameters of the HC and distances to anatomical landmarks—is appropriate for the study aims.

Results:

Results are presented clearly with mean values and standard deviations for key morphometric parameters, separated for right and left sides. The inclusion of bilateral data provides insight into possible anatomical asymmetries. Numerical values are precise and relevant to clinical anatomy.

Discussion and Clinical Relevance:

Although the provided text does not include an explicit discussion section, the conclusion underscores the clinical applicability of the morphometric data. It rightly emphasizes the value of these measurements for improving surgical planning and outcomes related to the craniovertebral junction and HC.

Clarity and Organization:

The manuscript is well-structured, with distinct sections for introduction, methods, results, and conclusion. The language is formal, precise, and appropriate for an anatomical research article.

Scientific Merit:

The study offers region-specific anatomical data that can inform surgical strategies, particularly in approaches that risk injury to the hypoglossal nerve and associated vascular structures. The data enhance the anatomical literature by contributing morphometric norms from the North Indian population.

Terminology and Language Use:

The terminology used is accurate and consistent with anatomical and clinical nomenclature. Sentences are clear and effectively communicate the study details.

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Overall Assessment:

This manuscript presents a solid anatomical study with practical implications for neurosurgery and craniovertebral interventions. It provides valuable morphometric data on the hypoglossal canal relevant to the North Indian population. The work is well-documented, scientifically sound, and suitable for publication in an anatomical or clinical journal.