

## REVIEWER'S REPORT

Manuscript No.: IJAR-52057

Date: 02/05/2025

Title: Morphometric Analysis of Hypoglossal Canal and its Topographical Relationship with Adjacent Structures in North Indian Dry Skulls

### Recommendation:

- ✓ Accept as it is .....
- Accept after minor revision.....
- Accept after major revision .....
- Do not accept (*Reasons below*) .....

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

Reviewer Name: Dr. S. K. Nath

Date: 03/05/2025

### Reviewer's Comment for Publication:

The research provides valuable anatomical and morphometric data on the hypoglossal canal in North Indian dry skulls, emphasizing its dimensions and relationships with surrounding structures. These findings can facilitate safer and more precise surgical interventions in the craniovertebral region. However, further research incorporating larger, more diverse populations and imaging modalities is necessary to enhance applicability to living patients and different demographic groups.

### Reviewer's Comment / Report

#### Strengths:

- **Comprehensive Morphometric Data:** The study provides valuable measurements of the hypoglossal canal's dimensions (transverse and vertical diameters) and its spatial relationship with key landmarks such as the occipital condyle, basion, and opisthion.
- **Clinical Relevance:** Results are directly applicable to neurosurgical procedures involving the craniovertebral junction, aiding in avoiding complications during surgeries like transcondylar approaches.
- **Population-specific Data:** The focus on North Indian dry skulls adds useful anthropometric data for this demographic, which can be important for regional surgical planning.
- **Clear Methodology:** Use of precise tools like digital Vernier calipers and statistical analysis enhances the reliability of measurements.

#### Weaknesses:

- **Limited Sample Size and Diversity:** The sample consists only of 50 dry skulls from a specific population, which may limit generalizability to other populations or living subjects.
- **Absence of Imaging Correlation:** The study relies solely on dry skulls and does not include imaging data such as MRI or CT scans for validation of measurements in vivo.
- **Lack of Variability Data:** The paper reports mean dimensions but provides limited information on the range or variation within the sample.
- **Potential Measurement Bias:** While precise tools were used, the manual measurement process could introduce slight inaccuracies.
- **No Functional or Pathological Data:** The study does not address variations in abnormal or pathological skulls, which are relevant for surgical planning.