**Original article:**

**A morphometric study of sacral hiatus for caudal epidural block among the population of West Bengal.**

**\*1Santanu Bhattacharya, 2Sudeshna Majumdar, 3Pitbaran Chakraborty, 4Sibani Mazumdar,**

**5 Ardhendu Mazumdar**

**1**Assistant Professor, Department of Anatomy, Calcutta National Medical College,

Kolkata-700014, West Bengal, India.

2Associate Professor, Department of Anatomy, Calcutta National Medical College,

Kolkata- 700014, West Bengal, India.

3Professor, Department of Anatomy, Bankura Sammilani Medical College,

Bankura -722102, West Bengal, India.

4Professor and Head, Department of Anatomy, Calcutta National Medical College,

Kolkata-700014, West Bengal, India.

**5**Associate Professor and Head, Department of Physiology, Institute Of Post Graduate Medical Education & Research, Kolkata-700020, West Bengal, India

**\*Correspondance: Email id:** dr.santanubhattacharya@gmail.com

**Abstract:**

**Introduction:** Single bony landmark may not help to detect the hiatus properly for caudal epidural block. The aim of the study was to measure the different aspects of the sacral hiatus and to identify significant anatomical landmarks to locate it.

**Methods:** Different morphometric measurements were taken of one hundred sacra with a Vernier caliper. These measurements may provide a guideline to locate the sacral hiatus.

**Results:** The average height and depth of the sacral hiatus were 3.592(mean)±0.3769(SD)cm and 0.723(mean)±0.0709(SD)cm respectively. The distance between right and left posterior superior iliac spines (superolateral sacral crests) was 6.48(mean)±0.5232(SD)cm and the distances from the apex of the sacral hiatus & sacral apex to those points were 5.841(mean)±0.2705(SD)cm,5.837(mean)±0.2769(SD)cm,8.137(mean)±0.2806(SD)cm,8.141(mean)±0.2793(SD)cm respectively.

**Conclusion:** Two isosceles triangles were obtained by joining the right and left superolateral sacral crests with apex of the hiatus and sacral apex. These triangles can be a bony landmark to detect the sacral hiatus easily. As the minimum distance between S2 and apex of the sacral hiatus is 1cm, introduction of needle beyond that is not safe during CEB.

**Key words:** caudal epidural block, sacrum,sacral hiatus, sacral cornua.

**Key notes:** Anatomical features of the sacral hiatus have clinical importance during caudal epidural block.