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**Original article:**

**Lower Thoracic and Lumbar Pedicle Morphometry using Computerized Tomography Scan**

**Sujay Mistri**

Associate Professor, Department of Anatomy, NRS Medical College, Kolkata – 700014

Corresponding author: Dr Sujay Mishri

**Abstract:**

**Introduction:** Pedicle fixation has become a common surgical practice now-a-days. Proper understanding of the anatomy of the vertebral pedicles is a prerequisite for the spinal surgeons. Knowledge of pedicle morphometry would reduce the risk of post operative complications. Aaccurate placement of well-fitted pedicle screw and non-interference with the adjoining neural structures is the key of successful surgery. **Methods:** Various parameters viz. length, breath, height, transverse angle and sagittal angle of the pedicle along with interpeduncular distance were measured in computerized tomography scan in all the 64 study subjects.

**Observations & Results:** Male subjects showed higher length, breath, height, transverse angle, sagittal angle and interpeduncular distance for all vertebral segments than their female counterpart. Steady raise in the measurements have been observed in length, breath and height of both the sexes from D9 to D12 vertebrae. Same parameters showed a gradual raise following a dip from D12 to L1 vertebrae. Wider transverse angles have been noted at D9 level. Transverse angles at D10 were narrowest, with progressive widening caudally. Sagittal angles became marginally more caudal wards from D10. No obvious left right asymmetry has been recorded. Interpeduncular distance in both the sexes showed gradual raise from D9 to D12 vertebrae. With a dip at L1 from D12, a steady increase of the interpeduncular distance has been recorded in successive lumbar vertebrae.

**Conclusion:** Outcome of the present study showed notable transition at thoraco-lumber junction. Detailed morphometric data generated from this study would be of immense help as a guide for pedicular surgery.

**Key words:** Vertebra, Pedicle, Interpeduncular distance