Akurasi arah penempatan sekrup pedikel pada vertebra thorakolumbal kadaver manusia dengan alat SubrotoSalimScoliometri Device (S3D) sebagai penuntun : suatu penelitian cross sectional = Accuracy of pedicle screw direction placement on thoracolumbar vertebra human cadaver using Subroto-Salim Seoliometri device (S3D) as a guidance

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Abstrak

ABSTRAK
OBJECTIVE: We determined whether the accuracy of thoracaolumbar pedicle screw direction placement is optimized with a technique using anatomic landmarks for pedicle screw and using S30 as guidance (Technique 1). This technique was compared with a technique using anatomic landmarks for pedicle screw placement without S3D as guidance (Technique 2).

METHODS: T7-L1 specimens were harvested from fresh human cadavers. Pedicle screw placement using technique 2 was performed on lelt side. Vertebral rotation and vertebral tilting measurement was determined using S3D. Then pedicle screw placement using technique 1 was performed on right side. Axial dissections were performed on pedicular specimens. Deviation of the screws from the ideal entry point or trajectory was analyzed to quantitatively compare the two techniques.

RESULTS: Axial analysis of the specimens showed that all screw placements were within the pedicles. Scatter plot analysis demonstrated that screws placed using Technique 2 were more likely to have the combination of entry points and trajectories medial to the ideal entry point and trajectory.

CONCLUSION: All screw placements were grossly within the confines of the pedicles, regardless of technique, as evidenced by axial dissections analysis.