

The association between proximal fusion level selection and outcomes in Lenke type-1 adolescent idiopathic scoliosis

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Abstract

Aim: This study aimed to evaluate the effect of PFL on clinical and radiological outcomes in Lenke type 1 AIS patients. **Methods:** The study was retrospective and included patients diagnosed with Lenke type 1 AIS with deformity correction and spinal fusion with the right main thoracic curve. The patients were allocated into two groups according to the selection of PFL, as T2 and T4 groups. Outcome measures and classification parameters were Scoliosis Research Society - 22r (SRS - 22r) score, Oswestry disability index (ODI) Turkish version, Lenke classification and Risser sign. The data of the two groups were compared. **Results:** Postoperative shoulder imbalance and trunk shift values were significantly lower in the T2 group whereas SRS - 22r scores were significantly higher in the T2 group ($p < 0.05$ for all). While the preoperative bending angles were significantly lower in the T4 group ($p < 0.05$), the two groups were similar in the postoperative Cobb measurement, thoracic kyphosis and lumbar lordosis angles, sagittal imbalance, and T1 tilt values ($p > 0.05$ for all). **Conclusions:** The selection of the T2 vertebra as the PFL is more advantageous in terms of clinical and radiological results. Additionally, there is no difference between T2 and T4 fusion levels in terms of complications.

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