

Oral presentation

Outcomes of brace treatment for adolescent idiopathic scoliosis

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Objective

To analyze outcomes of brace treatment for adolescent idiopathic scoliosis (AIS) in a retrospective fashion.

Study design

The subjects of the study were patients with AIS, whose Cobb angle was larger than 25 degrees and Risser sign was smaller than 3 at the start of the treatment, and who were followed for more than one year and at least until Risser sign of 4. Cervico-thoraco-lumbo-sacral orthosis (CTLSO) was used for thoracic curves and thoraco-lumbo-sacral orthosis (TLSO) was used for thoracolumbar and lumbar curves.

Results

The study sample consisted of thirty-nine girls, whose average age was 12.8 years and average Cobb angle was 37 degrees at the start of the treatment. The average curve magnitude increased to 45.4 degrees after a follow-up period of 2.8 years. Curve magnitude of eleven patients (28%) increased more than 10 degrees: in the remaining twenty-eight patients (72%) the change of their curve was ≤ 10 degrees. Presence of menarche, rib hump magnitude, and initial correction rate by the brace were the factors affecting the results.

Conclusion

Results of the brace treatment were better than the natural history reported by Bunnell [1]. The outcomes of the brace treatment for AIS may be improved if the correction by the brace can be improved.

References

1. Bunnell W.P.: **The natural history of IS before skeletal maturity.** *Spine* 1986, **11**:773-776.