

ORAL PRESENTATION

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SpineCore treatment for juvenile idiopathic scoliosis

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Introduction

The natural history of juvenile idiopathic scoliosis (patients who are least 4 years of age but younger than ten when the deformity is first identified) is usually a progression. In addition, patients who receive a diagnosis at five years or younger have a high chance of progression to a large curve, which may lead to pulmonary and cardiac complications. The mainstay of conservative treatment for scoliosis (juvenile as well as for the adolescent) is the brace. The purpose of this prospective interventional study was to evaluate the effectiveness of the Dynamic SpineCor brace for juvenile idiopathic scoliosis and to evaluate the stability of the spine after the weaning point.

Material and methods

From 1993 to 2009, 150 juvenile patients were treated by the SpineCor brace. 67 patients had a definite outcome and 83 are still actively being treated. The assessment of brace effectiveness was done following the outcome criteria recommended by the SRS.

Results

Concerning the 67 patients with a definite outcome, 32.9% corrected their Cobb angle with at least 5° and 10.5% had a stabilization of their Cobb angle. Out of all patients with a definite outcome, 37.3% of patients had surgical recommendation before skeletal maturity. Looking at the stability of the curves 2 years after the end of the treatment, 14.3% of the patients continued their correction even without the brace and 71.4% remained stable.

Discussion

It seems that the effectiveness of the SpineCor brace in obtaining and maintaining the neuromuscular integration of the corrective movement can be achieved even for the juvenile patients since over 85% of all patients that finished the treatment remained stable and some even corrected their Cobb angle after the brace was discontinued.

Conclusion

In conclusion, the SpineCor brace is effective for the treatment of juvenile idiopathic scoliosis and it seems that the results are better with an early bracing. Moreover, the positive outcome appears to be maintained in the long term.

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