

Oral presentation

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## Effectiveness of the SpineCor brace based on the standardized criteria proposed by the S.R.S. for adolescent idiopathic scoliosis - up to date results

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### Objective

The objective of this study was to verify the effectiveness of the Dynamic SpineCor brace for adolescent idiopathic scoliosis and to confirm the stability of the results two years after the end of the treatment.

### Study design

From 1993 to 2009, 840 patients were treated using the SpineCor brace. 413 patients fitted the inclusion criteria recommended by the SRS committee, and 159 patients were still actively being treated. Ultimately, 254 patients had a definitive outcome. The assessment of brace effectiveness included the following: percentage of patients who had a 5° or less curve progression and the percentage of patients who had 6° or more progression; percentage of patients who have been recommended for or have undergone surgery before skeletal maturity; percentage of patients with curves exceeding 45° at maturity (end of treatment); 2-years follow-up beyond maturity to determine the percentage of patients who subsequently underwent surgery.

### Results

Successful treatment (correction > 5° or stabilization ± 5°) was achieved in 165 patients of the 254 patients (64.9%) from the time of the fitting of the SpineCor brace to the point in which it was discontinued. 46 immature patients (18.1%) required surgical fusion while receiving

treatment. Two patients out of 254 (0.7%) had curves exceeding 45° at maturity.

### Conclusion

The SpineCor brace is effective for the treatment of adolescent idiopathic scoliosis. Positive outcomes are maintained after the weaning of the brace, as 99 patients out of 106 (93.3%) stabilized or corrected their Cobb angle. Moreover, out of the 93.3%, 12.3% of the patients still maintained their Cobb angle correction 2 years after the end of the treatment.