

Oral presentation

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## Effectiveness of the SpineCor brace based on the new standardized criteria proposed by the Scoliosis Research Society for adolescent idiopathic scoliosis

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### Objective

To evaluate the effectiveness of the Dynamic SpineCor brace [1] for adolescent idiopathic scoliosis (AIS).

### Study design

From 1993 to 2006, 493 patients were treated using the SpineCor brace. Of these patients, 249 subjects fitted the criteria for inclusion and seventy-nine were still actively being treated. Ultimately, 170 patients have a definitive outcome. Assessment of brace effectiveness included the following criteria: 1) percentage of patients who have five degrees (Cobb angle) or less curve progression and the percentage of patients who have six degrees or more progression; 2) percentage of patients for whom surgery was recommended or was carried out, before skeletal maturity; 3) percentage of patients with curves exceeding 45 degrees at maturity (end of treatment); and 4) two years' follow-up beyond maturity to determine the percentage of patients who subsequently underwent surgery.

### Results

Successful treatment (correction >5 degrees or stabilization  $\pm$  5 degrees) was achieved in 101 of the 170 patients (59.4%) from the time of the fitting of the SpineCor brace to the point at which it was discontinued. Thirty-nine immature patients (22.9%) required surgical fusion while

receiving treatment. Two patients out of 170 (1.2%) had curves exceeding 45 degrees at maturity.

### Conclusion

The SpineCor brace is effective for the treatment of AIS. Moreover, positive outcomes for 45 patients out of 47 (95.7%) treated with the SpineCor brace were maintained after two years.

### References

1. Coillard C, Leroux MA, Badeaux J, Rivard CH: **SPINECOR: a new therapeutic approach for idiopathic scoliosis.** *Stud Health Technol Inform* 2002, **88**:215-217.