

Coillard C, Vachon V, Circo AB, Beausejour M, Rivard CH.

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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The purpose of this prospective observational study was to evaluate the effectiveness of the Dynamic SpineCor brace for adolescent idiopathic scoliosis in accordance with the standardized criteria proposed by the Scoliosis Research Society Committee on Bracing and Nonoperative Management. They proposed these guidelines to make the comparison among studies more valid and reliable.

METHODS: From 1993 to 2006, 493 patients were treated using the SpineCor brace. Two hundred forty-nine patients met the criteria for inclusion, and 79 patients were still actively being treated. Overall, 170 patients have a definitive outcome. All girls were premenarchal or less than 1 year postmenarchal. Assessment of brace effectiveness included (1) percentage of patients who have 5 degrees or less curve progression, and percentage of patients who have 6 degrees or more progression; (2) percentage of patients who have been recommended/undergone surgery before skeletal maturity; (3) percentage of patients with curves exceeding 45 degrees at maturity (end of treatment); and (4) Two-year follow-up beyond maturity to determine the percentage of patients who subsequently underwent surgery.

RESULTS: Successful treatment (correction, >5 degrees, or stabilization, +/-5 degrees) was achieved in 101 (59.4%) of the 170 patients from the time of the fitting of the SpineCor brace to the point in which it was discontinued. Thirty-nine immature patients (22.9%) required surgical fusion while receiving treatment. Two (1.2%) of 170 patients had curves exceeding 45 degrees at maturity. One mature patient (2.1%) required surgery within 2 years of follow-up beyond skeletal maturity.

CONCLUSIONS: The conclusion drawn from these findings is that the SpineCor brace is effective for the treatment of adolescent idiopathic scoliosis. Moreover, positive outcomes are maintained after 2 years because 45 (95.7%) of 47 patients stabilized or corrected their end of bracing Cobb angle up to 2 years after bracing. Therapeutic study-investigating the results of treatment: level II.