

THE SPINECOR BRACE IN THE TREATMENT OF

SCOLIOSIS: THE PERTH EXPERIENCE

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INTRODUCTION

Bracing is a generally accepted form of treatment for scoliosis in skeletally immature individuals with Cobb angle of more than 20 deg. The efficacy of bracing is rather more controversial, mainly due to issues with study design and methodology. Compliance is also a major concern with the rigid bracing systems such as the Boston brace. We present our experience with the SpineCor bracing system, which is a low profile system that is also less restrictive. This dynamic system relies on the patients' corrective movements and also offers rotational correction.

METHODS

This is a retrospective case-note and radiological study with prospective data collection. Data collected include Risser scores, Cobb angles and conversion rates to rigid braces and to surgery. The SpineCor cohort is compared to a rigid brace cohort used as a historical case control series. All patients were treated in one institution by 2 surgeons and were under the care of 1 orthotist throughout their duration of treatment.

RESULTS

A total of 29 patients have completed treatment with this brace at the time of this study. Risser score at start of treatment was 2 or less in almost all patients. Average time in brace was 16 months (4-38). Only 4 out of the 29 patients went on to progress by more than 5 deg (13.8%). 5 patients ended up requiring surgery (17.2%). 9 patients were converted to a rigid brace and 3 of these went on to have a surgical correction and fusion. The average correction in the group that was treated exclusively with the SpineCor brace was a decrease in Cobb angle of 5.6 deg (-26 to 8).

CONCLUSIONS

Our progression rate of 13.8% compares favourably with the expected progression rate of 68% in this group. Our surgical conversion rate was also low at 17.2% - which compares favourably to the expected rate of 60%. Our control group, which was treated with a modified Boston type rigid brace showed a progression of more than 5 deg in 13 out of 32 patients (40.6%) and a surgical conversion rate of 11 patients (34.4%). We conclude that the SpineCor brace is an effective device for the brace management of scoliosis in a select group of patients. It is also potentially less restrictive and hence could encourage better compliance rates.