

Oral presentation

Proportion of correction and compliance to determine success in brace treatment

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from 4th International Conference on Conservative Management of Spinal Deformities
Boston, MA, USA. 13–16 May 2007

Published: 12 October 2007

Scoliosis 2007, **2**(Suppl 1):S13 doi:10.1186/1748-7161-2-S1-S13

This abstract is available from: <http://www.scoliosisjournal.com/content/2/S1/S13>

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Objective

The aim of the study is to obtain information regarding impact of technician input on outcome of thoracolumbar sacral orthosis (TLSO) treatment of idiopathic scoliosis (IS).

Study design

A group of patients (n = 205) with a diagnosis of IS (Cobb angle twenty to fifty degrees) were evaluated. Braces were made by two different groups of technicians. Measurements were taken from standing anterior posterior (AP) radiographs. Two groups of patients, with good and poor compliance, were formed.

Results

No significant difference of Cobb angle was found at the beginning of brace treatment in the two groups of technicians: (Group 1: n = 134, mean Cobb angle 31 ± 5 degrees); (Group 2: n = 71, mean Cobb angle 33 ± 6 degrees). Among patients with good compliance (n = 167) and also good initial correction (n = 125), a continuous correction of about 7 ± 6 degrees Cobb angle was evident. Patients with good compliance but poor initial correction (n = 42) can only expect prevention of progression (32 ± 5 degrees). Patient with poor compliance (n = 38) have shown progression of curvature with high variation (32 ± 6 to $37^\circ \pm 9$ degrees). At follow up, no significant difference was found between the two groups of technicians (Group 1: Cobb angle mean $23^\circ \pm 6$ degrees and Group 2: 26 ± 7 degrees).

Conclusion

The results depend on brace correction as well as input of the technician. The basis for poor correction in the brace may be multifactorial. Success can only be expected with good brace correction and compliance as input of the patient.