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Barcelona Scoliosis Physical Therapy School – BSPTS – based on classical Schroth principles: short term effects on back asymmetry in idiopathic scoliosis

M Jelačić*, M Villagrasa, E Pou, G Quera-Salvá, M Rigo

From 8th International Conference on Conservative Management of Spinal Deformities and SOSORT 2011 Annual Meeting
Barcelona, Spain. 19-21 May 2011

Background

Previous results have shown the specificity of Schroth exercises (according to BSPTS protocol) but in a series including patients under bracing [1-4].

Objective

To investigate the short term effects of an intensive program of exercises on back asymmetry in idiopathic scoliosis with no other treatment.

Materials and methods

Retrospective, including 47 patients with IS treated exclusively with exercises. Mean age 18.64 ± 5.78 years. Outpatient Intensive Rehabilitation was carried out, three hours a day, five days a week, 4 weeks. Surface topography (Formetric) was performed to measure trunk imbalance, surface rotation and lateral deviation before and after the treatment period. The obtained pre- and post-treatment values were then compared.

Results

The mean trunk imbalance prior to and after the treatment was 10.16 mm and 8.53 mm respectively ($p < 0.05$). The pre-treatment mean value of the lateral deviation (rms) was 13.92 mm, compared to the post-treatment one of 11.96 mm ($p < 0.05$) and of the lateral deviation (max) was 25.6 mm and 21.42 mm respectively ($p < 0.05$). The mean initial value of the surface rotation (rms) was 6.88 degrees, reaching 6.52 degrees at the end of the

treatment ($p < 0.05$) and of the surface rotation (max) 13.22 degrees and 11.88 degrees respectively ($p < 0.05$).

Conclusions

Current results suggest that exercises according to Schroth principles, following BSPTS protocol, are able to improve back asymmetry, spinal imbalance in the frontal plane and virtual spinal geometry in a short term, confirming specificity in its mechanics of action.

Published: 27 January 2012

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doi:10.1186/1748-7161-7-S1-O57

Cite this article as: Jelačić *et al.*: Barcelona Scoliosis Physical Therapy School – BSPTS – based on classical Schroth principles: short term effects on back asymmetry in idiopathic scoliosis. *Scoliosis* 2012 **7**(Suppl 1):O57.