

ORAL PRESENTATION

Open Access

# 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  $18.64 \pm 5.78$  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

## References

1. Rigo M, Quera G, Puigdevall N, Corbella C, Gil MJ, Martinez S, Villagrasa M: **Biomechanics of specific exercises to correct scoliosis in 3D**[abstract]. *Pediatr Rehabil* 2004, **7**:53-4.
2. Freidel K, Petermann F, Reichel D, Warschburger P, Weiss HR: **Medical and psychosocial outcome of Scoliosis In-Patient Rehabilitation (SIR)**. *5th international conference on conservative management of spinal deformities* Athens; 2008.
3. Weiss HR, Steiner A, Reichel D, Petermann F, Warschburger P, Freidel K: **Medizinischer Outcome nach stationärer Intensivrehabilitation bei Skoliose**. *Phys Med Rehab Kuror* 2001, **11**:100-103.
4. Lehnert-Schroth C: **Dreidimensionale Skoliosebehandlung**. Urban/Fischer, München; 6 2000.

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.