

O-57

BARCELONA SCOLIOSIS PHYSICAL THERAPY SCHOOL – BSPTS – BASED ON CLASSICAL SCHROTH PRINCIPLES: SHORT TERM EFFECTS ON BACK ASYMMETRY IN IDIOPATHIC SCOLIOSIS

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Background: Previous results have shown the specificity of Schroth exercises (according to BSPTS protocol) but in a series including patients under bracing.

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

Material 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 ($p < 0.05$).

Conclusion: Current results suggest that exercises according to Schroth principles, following the 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.

O-58

SHORT-TERM EFFECTS BY USING ADDITIONAL METHODS IN DOBOMED PREPARATION PHASE FOR AIS DOUBLE MAJOR PATIENTS -PILOT STUDY

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Aim of the study: The assessment of physiotherapy various models to the clinical examination results – short term observation during the stationary intensive rehabilitation.

Material and methods : Thirty five girls with AIS double major (mean Cobb's angle – Th= 27.0 ± 7.5 ; L= 24.0 ± 5.6) were divided for two randomized groups. In group A was applied only standard DoboMed.

In group A-plus was applied triple method (DoboMed + OMT Kaltenborn-Evjenth + Dynamic Brace System –Meditrac). The derotation manual therapy techniques and Meditrac were used in DoboMed preparation phase. Meditrac was used only in the part of lumbar spine once a day during 30 minutes. The stationary intensive rehabilitation for both groups have been continued during 3 weeks.

Before and after observation have been analyzed: the respiratory system function (spirometry-VC, FEV1, PEF), the strength of respiratory muscles (maximal inspiration and expiratory pressures- MIP,MEP), the trunk morphology and function (kyphosis and range of spine motion by V-plurimeter; the trunk rotation angle-ATR by Bunnell's scoliometer).

Results: MIP and spine flexion values were increased significantly in both groups during therapy. In the group A-plus was observed more significant changes of parameters. Increasing of PEF, kyphosis, spine extension and lateral flexion values and decreasing of ATR were observed.

Conclusion: In the short time were observed functionally and morphology improvement in group of patients treated by DoboMed with OMT Kaltenborn-Evjenth and Dynamic Brace System –Meditrac. This additional methods have been used successfully in DoboMed preparation phase for AIS double major patients.