

ORAL PRESENTATION

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Sports, in association with specific exercises, can help to achieve better results in controlling the evolution of scoliosis

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Background

SOSORT Guidelines recommend that patients, who follow a conservative treatment program for scoliosis, practice sport activities in association with Specific Physiotherapy Exercises (PSE). From a theoretical point of view, the sport activity combines well with the goals of treatment of a disease characterized by a postural dysfunction.

Aim

The purpose of this study is to compare the results at the end of rapid growth spurt (Risser 3), between a group of patients treated with a conservative protocol (exercise and/or brace), and a group of patients who have added some sport activity to the same protocol.

Methods

We evaluated 543 patients (497 females/45 males) treated for idiopathic scoliosis with either PSE only (144 patients, $15.5^{\circ} \pm 9.3^{\circ}$ Cobb), or brace and PSE (399 patients, $33.3^{\circ} \pm 12.1^{\circ}$). Patients started treatment at Risser 0-1, with a minimum age of 10 years, and were followed up to Risser 3. A comparison was then made between the following subgroups:

PSE + Sport (PSESP: 88 patients, $14.8^{\circ} \pm 5.7^{\circ}$) vs PSE only (PSE: 56 patients, $16.6^{\circ} \pm 13.1^{\circ}$)

Brace + PSE + sport (BPSESP: 182 patients, $32.2^{\circ} \pm 10.7^{\circ}$) vs Brace + PSE (BPSE: 217 patients, $34.2^{\circ} \pm 13.2^{\circ}$) Outcome: Variation of $^{\circ}$ Cobb at Risser 3 Statistical analysis: ANOVA, T-Test.

Results

At the onset we did not find statistically significant differences between the groups. The comparison of $^{\circ}$ Cobb at Risser 1, and 3, shows better results in PSESP (improvement of 0.53°) compared to PSE (progression of 1.75°), but the difference is not statistically significant. Analysis of the results of braced patients at Risser 3 showed improvement of both groups (BPSESP 3.87° , BPSE 3.01°). The difference for the final result was statistically significant ($P=0.04$).

Conclusions

In the context of conservative treatment, sport activity, in association with a specific exercise program, seems to be useful to contrast the evolution of scoliosis, especially for braced patients.

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