

Oral presentation

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A study of athletic abilities in idiopathic scoliosis patients with brace therapy

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Background

Brace therapy for scoliosis patients may reduce the flexibility of the spine due to the correction of the trunk during the patient's high growth period. However, the influence of brace therapy on athletic ability is still unknown.

Goal

The purpose of this study is to investigate athletic abilities in scoliosis patients during partial brace therapy.

Methods

Ninety-six idiopathic scoliosis patients treated with brace therapy for more than one year were investigated. The average age was 14.3 years. The follow-up period averaged 4.5 years. There were 77 patients with an Osaka Medical College brace, 15 with a Boston brace, and 4 with other braces. All patients applied the brace only at night.

Subjective flexibility of the spine after brace therapy was evaluated. Athletic abilities, including running short and long distance, along with athletic club activities in school were also investigated.

Results

The subjective flexibility of the spine was reduced severely in 8% of the patients, and slightly in 42% of the patients. Short distance running ability was higher than "Normal" in 60% of the patients and it was also higher in 52% of the patients for long distance running before brace therapy. After brace therapy, athletic ability was unchanged in

91.7% of the patients. Thirty-eight percents of the patients belonged to a sports club in school. While thirteen percent of patients complained of a reduction in athletic ability during brace therapy.

Conclusion

We conclude that the influence of partial brace therapy on athletic abilities in idiopathic scoliosis patients is fairly low.