

Oral presentation

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The treatment of adolescent idiopathic scoliosis with Cheneau brace: long term outcome

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Aim

The aim of this study is to evaluate our results of the I.S. treatment with Cheneau bracing with a medium follow-up of 4.5 years.

Methods

The inclusion criteria included the following: diagnosis of evolutive idiopathic scoliosis (I.S.), exclusive treatment with the Cheneau brace, at least 30 months of treatment, and a minimum follow up of 20 months. Every patient was studied with anamnesis, clinic exam, and a radiographic examination. The following was obtained from the medical history: age, sex, BMI, type of scoliosis, period of treatment, type or protocol of treatment, time of follow-up, old radiographic collection, and re-evaluation of all curves with the Cobb method. All patients were asked to complete a five-question questionnaire (SRS-22 modified) about treatment satisfaction and to write a commentary about the main difficulties of treatment. At clinic examination, all anatomic findings were evaluated (height and weight, BMI, rib hump, shoulders and trunk asymmetry, etc.). The radiographic film was compared with old exams, evaluated with Cobb angle measurements, and measurements of vertebral rotation.

Results

From the 650 patients called, 152 met the inclusion criteria. 91.5% of the population was female. The middle time of follow up was 56.3 months (range of 20 to 132 months). The middle time of treatment was 56.1 months

(range of 31 to 108 months). 40.8% of patients indicated that a parent was afflicted by scoliosis. 78.9% of the population was previously treated with a cast (40.3% utilized only one cast for 3 months). At the end of the treatment, we observed an average initial curve improvement of 23.3% (maximum 45.1%, minimum 28.9%). At follow up, we observed an average improvement of 15% from the beginning of treatment (maximum of improvement 37.2%, maximum of lost of 36.9%).

Conclusion

At the end of treatment we observed an improvement in correction around at 23% (p value < 0.05) from the beginning curves, and after 5 years there was stabilization at approximately 15% (p value < 0.05). Our results demonstrate that conservative treatment with the Cheneau brace is corrective for the treatment of I.S.