

Oral presentation

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A series of patients with adolescent idiopathic scoliosis treated with a Rigo System Chêneau (RSC) brace. Primary correction in brace improved by technical evolution

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Objective

To compare the current primary correction in brace with that achieved in a previous series [1], after gaining personal experience and forcing a technical evolution of the original Chêneau technique.

Study design

Retrospective unselected case series of thirty-two patients (29 females, 3 males) with adolescent idiopathic scoliosis (AIS). The mean age for the group was 12 ± 1.2 years, mean Risser was 0.7 ± 1.1 and mean Cobb angle was 34.1 ± 7.1 degrees. Only those patients receiving brace treatment for the first time were included, in order to minimize the influence of factors other than technical changes. They were matched to those from the previous series ($n = 66$, 12 ± 2.1 years, Risser 0.8 ± 1.1 , Cobb angle 32.8 ± 9.4 degrees). All the patients treated during years 2005–2006 and fulfilling the following inclusion criteria were included: 1. First brace; 2. A diagnosis of AIS; 3. Age: 10–14 years; Risser 0–3; Cobb angle > 25 degrees.

Results

The patients from the present study showed a primary correction of $41.5\% \pm 16$, which was significantly higher than the previous $32.8\% \pm 9.4$.

Conclusion

Primary correction can be improved by both experience and technical evolution based on: 1. Better definition of the passive and active de-rotational mechanism; 2. More

physiological sagittal profile; 3. Well defined principles of correction, based on curve pattern.

References

1. Rigo M, Quera-Salvá G, Puigdevall N, Martínez M: **Retrospective results in immature idiopathic scoliotic patients treated with a Cheneau brace.** *Stud Health Technol Inform* 2002, **88**:241-245.