

Oral presentation

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## Evaluation of conservative scoliosis treatment compliance

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### Background

The main purpose of this study is to evaluate orthosis treatment compliance of patients affected by adolescent idiopathic scoliosis (AIS).

### Methods

We examined 106 patients (96 females, 10 males) affected by AIS. The patients were treated with different types of orthoses (Lionese, Milwaukee, P.A.S.B., Lionese+P.A.S.B., Milwaukee+P.A.S.B., Milwaukee+Lionese). In order to evaluate the compliance and the final results related to the patient's behavior, we considered the following: the patient's compliance as related to bracing method, sex, trend of the spine curve, and age; the degree of scoliosis; and the duration of treatment.

### Results

Our study indicated a greater number of highly compliant patients (66) than in compliant (40). For the in compliant group, 52.5% had not worn the brace for long time (more than 3 months), and the others only wore the brace in the summer or at school. Inside the in compliant group, 50% had been treated with the Milwaukee brace. It was also noticed that in mixed-brace treatments, the Milwaukee brace raised the percentage of in compliance. For the compliant group, 47% had been treated only with the P.A.S.B. brace and 6% with a mixed-brace treatment, including P.A.S.B. 28.3% of the patients had ceased the treatment before the scheduled date. Patients who terminated the treatment at an age of more than 17 years had a higher degree of improvement (10.81%) compared with an age

lower than 17 years (9.38° Cobb). When the brace was discarded, patients who did not complete the treatment course (more than 50% wore P.A.S.B.) showed a slightly greater improvement than those who completed the treatment.

### Conclusion

The study indicated that brace type, patient compliance, and completion of the treatment until skeletal maturity are very important for patient outcome in the improvement of AIS. Patient compliance depends on the orthoses type and not on the sex. The compliance of Milwaukee brace is lower than the P.A.S.B., because the Milwaukee brace is more visible and has the chin support, while the P.A.S.B. fits better and is less visible. Treatment in compliance is caused by several factors, including psychological elements and radiologic improvement of the spine curve that the patient mistakenly interprets as full recovery.