

Pain and function in adult patients with scoliosis attending a rehabilitation center

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Introduction Scoliosis is a very frequent problem during adulthood. Surgery is a very common option for these patients, but there are relevant risks and side effects and not all patients are willing for such treatment. For these reasons many patients seek for a conservative treatment in rehabilitation centers. For the assessment of quality of life in these patients the SRS-22 questionnaire was first developed, and more recently the SRS-7, a shorter unidimensional questionnaire based on the Rash analysis, was created. No comparison of these tools is available in a rehabilitation setting for adult with scoliosis.

Objective The aim of the present study is to provide an overview of the clinical characteristics of adult patients seeking for a clinical evaluation at a rehabilitation center specialized in scoliosis conservative treatment based on the SRS-22 and the SRS-7 questionnaires.

Methods We retrospectively review the record of all the adult patients included in our prospective database running between 2003 and 2017. The inclusion criteria were: diagnosis of idiopathic scoliosis with a curve of 30° Cobb or more, no surgical treatment, availability of the SRS-22 and SRS-7 questionnaires. The SRS-22 is based on 5 items (Function, Psychological wellbeing, Pain, Aesthetics and Satisfaction for treatment), with scores ranging from 5 (no impairment) to 0 (high impairment). The SRS-7 gives a comprehensive score of quality of life. Patients were divided by sex. We separately analyzed the 5 items of the SRS-2 and we looked for correlation with the clinical features including Cobb angle, BMI, Angle of Trunk Rotation, age.

Results 244 patients (37 males) respected the inclusion criteria. The mean Cobb angle was $48 \pm 14^\circ$, Age 37 ± 15 . All the items the SRS-22 showed reduced values of: Function 3.8 ± 0.6 , Psychological wellbeing 3.5 ± 0.8 , Pain 3.6 ± 0.8 , Aesthetics 3.1 ± 0.6 with respect to normative values for healthy adults (ranging from 4.1 to 4.6). There were no differences for sex. The global score for the SRS-22 was 3.5 ± 0.5 (range 0-5) while for the SRS-7 was 36 ± 13 (range 0-100). The correlation was moderate (0.53). No relevant ceiling effect was noted. The Cobb angle correlated with the SRS-22 and SRS-7 global value and with pain, but the strength was very low (0.17 and 0.18 respectively). A slightly higher correlation was found between Cobb and Aesthetics (0.26). 28% reported to use drugs for pain control, 4.5% on a weekly base, 2% on a daily base.

Conclusion This is the first study reporting the general characteristics of patients affected by scoliosis attending a specialized rehabilitation center based on the SRS-22 and SRS-7 questionnaires. Both questionnaire can describe the population of adult with scoliosis, being the SRS-7 shorter to fill. Adult scoliosis patients poorly performed globally and in all the analyzed items. The clinical characteristics of patients are not good predictors of pain, disability and aesthetics.