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Characteristics of patients with more than 20° of improvement or worsening during conservative treatment of adolescent idiopathic scoliosis.

[Negrini S](#), [Donzelli S](#), [Lusini M](#), [Zaina F](#).

Physical and Rehabilitation Medicine, University of Brescia, Italy. stefano.negrini@isico.it

Abstract

INTRODUCTION: Since the beginning of history of Medicine, it has been possible to learn from the worst and best results of treatments. Our aim was to verify which patients can reach the best and worst results during conservative treatment.

METHODS: All AIS patients with more than 2 visits included in a prospective clinical database started in September 2003 were reviewed on August 31st 2010. A cut-off of 20 degrees (improvement or worsening) from the first observation was used to select patients. Patients were analysed for diagnosis, morphology, Cobb degrees at start, curve improved/worsened, treatment, gender, Body Mass Index, clinical parameters.

RESULTS: Out of 1886 consecutive patients, 62 (3.3%) changed 20° or more: 26 (1.4%) improved (range 20-34°), 36 (1.9%) progressed (20-60°). Relative Risk of progression of 20° or more was increased more than 10 times in cases of thoracic curve or secondary scoliosis, 5 times for Moe scoliosis and BMI <15 kg/mq, 3 times for age <12 years, and congenital or juvenile scoliosis. Relative Risk of improvement of 20° statistically was increased more than 3 times in cases of previous exercises, female gender, thoracolumbar curve or scoliosis, ISICO treatment, and age <12 years.

CONCLUSION: Not all our results correspond to the usually reported prognostic factors in ample case series, but it must be taken into account that only wide variations (20° or more) have been considered here. In this population we had 1.9% of patients who improved at least 20° with conservative treatment, and this is notable as well. Finally, since these results are not similar to what would be expected according to the known natural history, conservative treatment appears able to change it.

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MeSH Terms

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