Scoliosis

ORAL PRESENTATION Open Access

Rehabilitation in adult scoliosis: introduction

Stefano Negrini

From 7th International Conference on Conservative Management of Spinal Deformities
Montreal, Canada. 20-22 May 2010

The rehabilitation approach to adult idiopathic scoliosis (ADIS) is a topic not well defined in the literature, and today very few papers have been published, while personal experiences and expertises seems to prevail. The main problems to be faced in ADIS patients involve:

1. Reducing/controlling pain
2. Trying to avoid scoliosis progression
3. Facing postural collapse with a flexed posture in the last stages of evolution
4. Controlling other problems like respiratory dysfunctions

Pain will be considered in other presentations of this same series, while treatment of respiratory dysfunctions are not different from those in other restrictive thoracic syndromes as ADIS is.

Very typical of ADIS is progression and postural collapse. In reality, we treat patients in adolescence to reach an adult scoliosis below the recognised risk limits for progression, and this is also a main reason for surgery. If it progresses, ADIS can evolve up to 0.5-1° per year, and this can last in the long term in a completely flexed posture.

Possible rehabilitation instruments to face progression and flexed posture involve:

1. Manual treatment
2. Physical Therapy Modalities
3. Exercises
4. Bracing

The first 2 do not have any published results in this respect in the literature, apart from some case reports for Manual Therapy, where exercises had also been added. Nevertheless, in theory they should not be able to increase defences of the spine versus a possible progression.

Hypothetically, rigid braces could be useful, but they are a real problem; on one side ADIS patients do not really stand braces able to adequately support the spine, on the other there are no braces really able to avoid a flexed posture once established: they should reach a point below the hip, but this is not compatible with everyday life. So, braces can generally give some support, if accepted, or can reduce some pain. Recently SpineCor has been used in ADIS, but we need some more time to understand its possible usefulness: our first experiments are quite positive.

Finally exercises. Exercises for therapy are like drugs: it all depends on what you use, when and why. ADIS is a problem of support of a collapsing spine, and you can use exercises who relax, soften, stretch tissues: many times these exercises can reduce pain, but in the long term they also usually reduce spontaneous spinal defences (rigidity): we will give some case reports of these awful situations. On the contrary, exercises focused on stabilizing, strengthening, increasing neuromotor control, improve posture, develop the ability to counteract the gravity force, can be useful. A paper showing results in ADIS of exercises based on these principles in reducing in the long-term the curve is now underway for publication, offering a possible conservative alternative to surgery.

ADIS, like adolescent idiopathic scoliosis, is a great challenge for rehabilitation: like always with scoliosis expert and specific approaches need to be developed, and this will be a great future challenge for our Scientific Society.

Published: 10 September 2010

doi:10.1186/1748-7161-5-S1-O49
Cite this article as: Negrini: Rehabilitation in adult scoliosis: introduction. *Scoliosis* 2010 **5**(Suppl 1):O49.

ISICO (Italian Scientific Spine Institute), Milan, Italy
Full list of author information is available at the end of the article