Feasibility of conducting a multicentre prospective study evaluating different physiotherapy methods for the treatment of mild idiopathic scoliosis patients using standardized methods of evaluation: call for a consensus

Josette Bettany-Saltikov, Jean Claude de Mauroy, Mark Farrugia

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

Introduction
The SOSORT physiotherapy consensus (2005) demonstrated that scoliosis specialists were in agreement that several features in the rehabilitation of patients with idiopathic scoliosis can be regarded as standard. The purpose of this study was to call for a preliminary consensus regarding the feasibility of conducting a multicentre prospective study evaluating different physiotherapy methods for the treatment of scoliosis using standardized methods of evaluation.

Materials and methods
The consensus questions were e-mailed to key members of SOSORT and colleagues specialising in scoliosis. The responses were analyzed quantitatively and qualitatively.

Results
Of the responses received, 50% were Doctors, 45% physiotherapists and 5% were Osteopaths (n=20). 94.7% of participants agreed that physiotherapy can limit scoliosis progression and 95% agreed that it would be useful to conduct the proposed prospective study. 89.5% agreed that the initial inclusion criteria for the study should be female idiopathic scoliosis patients aged 11 to 13 (94.7%). Risser scale (0-1) had 84.2% responding positively when compared to Tanner pubic hair and Tanner breast (68.4% and 52.6% respectively). The mean minimum and maximum Cobb angles were 13.9° and 26.4° (retained values of 15° and 25° for the study). Of the respondents, 94.7% found the material to be useful. Many commented on the respiratory function, some feeling the need for high quality objective tests including spirometry, exercise testing and plethysmography, while others stated that mild scoliosis would have no effect on respiratory function. For the measurement of hip rotation asymmetry, pelvic and shoulder tilt the majority of participants agreed that they preferred to measure these in degrees, while for waist asymmetry, TRACE was preferred. 84.2% of respondents unanimously agreed with ATR Bunnel in degrees. 57.9% of respondents agreed with using the terms “rib hump” “frontal balance” (52.6%) and “Sagittal profile” (63.2%) in mm (10% evoked the Rippstein pluri-meter). The majority agreed on a multifactorial analytic and global asymmetric approach in an outpatient/community setting. Muscle strength testing was rigorously debated and evolved around the idea that strength is not an issue in scoliosis. The SRS-22 was preferred however comments included validating and adapting this further, and offers were forthcoming to aid the development of a universal trans-cultural psychological tool.

Discussion
This preliminary pilot consensus study (first round) clearly demonstrates the importance of conducting a multicentre prospective study and implementing article 22.2 of the SOSORT statutes proposed 4 years ago. This states “A database to collect important information about the results of exercises for the treatment of Scoliosis and other Spinal Deformities shall be created”. This database would significantly help elucidate the
numerous questions cited in Figure 1 and above regarding the effectiveness of scoliosis specific exercises for the treatment of patients with mild scoliosis.

**Conclusion**

The full consensus still needs to go through a second round as well as validation by the board and participants during the next meeting. At this point full consensus should be reached on the proposed inclusion criteria, the management of scoliosis patients, the method as well as the objective and standardised evaluation. Some results could also be used for screening.

![Figure 1](http://www.scoliosisjournal.com/content/5/S1/O30) Results of preliminary consensus study.