

2016 SOSORT guidelines: orthopaedic and rehabilitation treatment of idiopathic scoliosis

during growth

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Background

The International Scientific Society on Scoliosis Orthopedic and Rehabilitation Treatment (SOSORT) produced its first guidelines in 2005 and renewed them in 2011. Recently published high-quality clinical trials on the effect of conservative treatment approaches (braces and exercises) for idiopathic scoliosis prompted us to update the last guidelines' version. The objective was to align the guidelines with the new scientific evidence to assure faster knowledge transfer into clinical practice of conservative treatment for idiopathic scoliosis (CTIS).

Methods

Physicians, researchers and allied health practitioners working in the area of CTIS were involved in the development of the 2016 guidelines. Multiple literature reviews reviewing the evidence on CTIS (assessment, bracing, physiotherapy, physiotherapeutic scoliosis-specific exercises (PSSE) and other CTIS) were conducted. Documents, recommendations and practical approach flow charts were developed using a Delphi procedure. The process was completed with the Consensus Session held during the first combined SOSORT/IRSSD Meeting held in Banff, Canada, in May 2016.

Results

The contents of the new 2016 guidelines include the following: background on idiopathic scoliosis, description of CTIS approaches for various populations with flow-charts for clinical practice, as well as literature reviews and recommendations on assessment, bracing, PSSE and other CTIS. The present guidelines include a total of 68 recommendations divided into following topics: bracing ($n = 25$), PSSE to prevent scoliosis progression during growth ($n = 12$), PSSE during brace treatment and surgical therapy ($n = 6$), other conservative treatments ($n = 2$), respiratory function and exercises ($n = 3$), general sport activities ($n = 6$); and assessment ($n = 14$). According to the agreed strength and level of evidence rating scale, there were 2 recommendations on bracing and 1 recommendation on PSSE that reached level of recommendation "I" and level of evidence "II". Three recommendations reached strength of recommendation A based on the level of evidence I (2 for bracing and one for assessment); 39 recommendations reached strength of recommendation B (20

for bracing, 13 for PSSE, and 6 for assessment).The number of paper for each level of evidence for each treatment is shown in Table 8.

Conclusion

The 2016 SOSORT guidelines were developed based on the current evidence on CTIS. Over the last 5 years, high-quality evidence has started to emerge, particularly in the areas of efficacy of bracing (one large multicentre trial) and PSSE (three single-centre randomized controlled trials). Several grade A recommendations were presented. Despite the growing high-quality evidence, the heterogeneity of the study protocols limits generalizability of the recommendations. There is a need for standardization of research methods of conservative treatment effectiveness, as recognized by SOSORT and the Scoliosis Research Society (SRS) non-operative management Committee.

Keywords

Idiopathic scoliosis Treatment Guidelines