Adolescent Idiopathic Scoliosis – A review of the treatments and evidence-based practice

Deborah Goodall¹, Hans-Rudolf Weiss²
¹Scoliosis UK Limited, 163 Sandringham Road, Watford, United Kingdom
²Asklepios Katharina Schroth Spinal Deformities Rehabilitation Centre, Korczakstr. 2, Bad Sobernheim, Germany

BACKGROUND: Treatment options for Adolescent Idiopathic Scoliosis include: exercises; in-patient rehabilitation; braces and surgery. The indications are based on developmental and epidemiological aspects and outcomes are usually compared with the natural history or observation. The aim of this review is to provide a synopsis of all treatments in relation to evidence-based practice.

METHODS: A systematic review was performed and searched for the outcome parameter ‘rate of progression’. Only prospective controlled studies that considered the treatment versus the natural history were included. The search strategy included the terms; ‘Adolescent Idiopathic Scoliosis’; ‘Idiopathic Scoliosis’; ‘natural history’; ‘observation’; ‘physiotherapy’; ‘physical therapy’; ‘rehabilitation’; ‘bracing’; ‘orthotics’ and ‘surgery’.

RESULTS: Retrospective studies have been found to support out-patient physiotherapy and one prospective controlled study to support Scoliosis In-patient Rehabilitation (SIR). One prospective multi-centre study, a long-term prospective controlled study and a meta-analysis have been found to support bracing. No controlled study was found to support surgery.

CONCLUSIONS: There is some evidence supporting the conservative treatment for Adolescent Idiopathic Scoliosis, but it is weak in number and length. No substantial evidence has been found to support surgical intervention. In order to develop a substantial evidence-based for the use of any intervention more controlled studies are necessary, especially in the case of invasive surgery.