brace involves a significant reduction in the QoL, whatever instruments of evaluations are used. This can affect treatment adherence specially by reducing the wearing period per day. This study shows that much progress needs to be made in terms of aesthetics, pain and acceptance of the brace, through multidisciplinary teamwork.

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Romberg coefficient utility in posturographic analysis of adolescent idiopathic scoliosis

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Aim. – Adolescent idiopathic scoliosis (AIS) is a three-dimensional deformation of the spine. According to data from the literature, AIS disturbed on the sensory level, have more difficulty during postural adjustments. The purpose of this study is to compare the postural behavior of AIS subjects and a control group in stable and unstable conditions, by means of posturographic parameters commonly used and more particularly the Romberg coefficient (RC).

Method. – Controlled, retrospective (from prospectively collected data) study of 24 female subjects (age = 14.2 ± 1.2 years). Four groups of six subjects were formed: three groups of AIS (Cobb angle = 27.2° ± 8.9°) depending on the type of curvature (group RTLL, RTL and LTL), and a control group C. Groups were matched for age, height, weight, and Cobb angle for AIS. Each AIS subject performed eight sets of three records (four sets of three for C) on a force platform in the following conditions: stable and unstable surface, eyes open and eyes closed, with and without brace. The average of three tests being considered for the analysis.

Results. – On firm surface, sway area is higher in eyes open conditions for the RTL group (p = 0.01*), while the RTLL group has same results than group C. Romberg coefficient (RC) is substandard in the AIS group (p = 0.04*).

On unstable surface, there are differences between AIS groups for the length of displacement of the center of pressure (p = 0.04*). The RC increases but no longer differs between groups.

Discussion. – AIS reveal bad visual integration on stable surface (low RC), behave differently depending on the type of curvature and increase their visual dependence on unstable surface.

Further readings


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