

## **Abstract**

Adolescent idiopathic scoliosis (AIS) is characterised as a three-dimensional deformity of the spine with unknown etiopathogenesis. There is evidence that scoliosis may be associated with abnormalities of the vestibular system. Examination of postural stability and verticality perception is a way to assess vestibular function. The objective of this work is to compare postural stability and subjective visual vertical (SVV) between adolescents with idiopathic scoliosis and healthy controls. Twelve AIS patients and twelve controls participated in the study. Examination of postural stability was performed through a Kistler force platform and the SVV was tested using a pre-programmed computed equipment Synapsys. An instrument for evaluating the perception patients have of their trunk deformity, Trunk Appearance Perception Scale (TAPS), was also part of the examination. Our results did not show a significant difference between the two groups in postural stability and static SVV-S. Statistically significant difference was found on dynamic SVV-D with clockwise rotation ( $p < 0,01$ ): AIS patients ( $1,19^\circ \pm 1,03^\circ$ ), control group ( $-0,17^\circ \pm 0,82^\circ$ ). There was also a significant difference on absolute deviation of dynamic SVV-D with clockwise rotation ( $p < 0,05$ ): AIS patients ( $1,50^\circ \pm 0,77^\circ$ ), control group ( $0,81^\circ \pm 0,41^\circ$ ). These findings suggest a possible disturbance in verticality perception of patients with idiopathic scoliosis.