Cephalic stabilization and idiopathic scoliosis
M.-A. Guyot 1, J.-F. Catanzariti, M.-O. Agnani, C. Donze, S. Demaille
Service de MPRF-GHICL, 115, rue du Grand-But, 59462 Lomme, France
Corresponding author.
E-mail address: guyot.marc@ghicl.net.

Keywords: Idiopathic scoliosis; Cephalic repositioning; Cervical Proprioception

Introduction.— In idiopathic scoliosis (IS), increase of osteopontin tissue expression [1] due to a defect of melatonin signaling could explain the various anomalies that can disturb postural control including cephalic stabilization control. Cephalic stabilization is influenced by visual, ocularmotor, proprioceptive and cervical information and used as a reference to vertical gravity.

Objective.— To evaluate the cephalic stabilization in IS, with a validated test: Cephalic Repositioning Test (CRT).

Methods and materials.— In this prospective study, we evaluate, in a IS population with an angle Cobb ≥ 15°, 40 percent have a pathological right and left CRT (> 6°), 76.9% have at least one pathological CRT and 61.1% have a pathological left CRT. Higher right lateralization was found significantly after repositioning. Abnormal left CRT is associated with a high angle Cobb lumbar (P < 0.05), and more significant with left convexity lumbar scoliosis (P < 0.05).

Discussion and conclusion.— These preliminary results show a disturbance of CRT and indirectly proprioceptive cervical control in IS. Requires further evaluation with a larger number of IS and matched a control group. In this disease, the test standardization is the detection and guidance to a specific rehabilitation: oculo-cervical reprogramming according to Revel’s [2] protocol.

Références

Further reading


Keywords: Lumbar orthosis; Intradiscal pressure; Finite element; Low back pain