The influence of a specific exercise program on the balance of individuals with Ankylosing Spondylitis

Mesquita, C.^{1,2}, Santos, P.^{1,2,3}, Pereira, J. ¹, Lopes, S.^{1,2,4}

¹Departamento de Fisioterapia, Escola Superior de Saúde – IPP-Porto, Portugal, ccm@ess.ipp.pt
²Centro de Investigação e Reabilitação, Escola Superior de Saúde – IPP-Porto, Portugal, srl@ess.ipp.pt
³Centro de investigação em Atividade Física, Saúde e Lazer da Universidade do Porto, Portugal, pcs@ess.ipp.pt
⁴Departamento Fisioterapia, Escola Superior de Saúde do Vale do Sousa, Portugal, sofia.lopes@ipsn.cespu.pt

ABSTRACT

BACKGROUND: Ankylosing spondylitis (AS) is a rheumatic, inflammatory and chronic disease inserted in the group of spondyloarthropathies. It is characterized by mobility deficits in the spine and pain, presenting also extra-articular signs such as entesopathy and uveitis. Diagnosis is achieved by combining clinical and radiographic criteria. Studies performed with AS patients have shown a decrease in postural control resulting from loss of mobility of the spine and adjacent joints. OBJECTIVES: To verify the influence of a specific weekly exercise program with 10 sessions in individuals with AS and to verify the link between Bath Indexes and this same program. METHODS: A quasi-experimental study was performed in 13 individuals with AS. 7 individuals were doing the exercise program, being part of the experimental group and 6 individuals were part of the control group. Biodex Balance System® and Bath Indexes were used as evaluation tools. A P value <0.05 was considered as statistically significant. RESULTS: There were no statistically significant changes in the experimental group balance over the 10 weeks. Statistically significant results found only in BASDAI (p=0,047) and BASFI (p=0,016) of the Bath Indexes. **CONCLUSIONS**: It was concluded that a program of exercises aimed for joint mobility and postural control did not present significant improvements in the balance of a population with AS, although they showed improvements on the functionality and symptomatology of the disease.

Keywords: bath indexes; biodex balance system®, exercise

References:

- [1] Demontis A, Trainito S, Del A, Masiero S. Favorable effect of rehabilitation on balance in ankylosing spondylitis: a quasi-randomized controlled clinical trial. Rheumatology International. 2016; 36(3): 333–339.
- [2] Durmus B, Altay Z, Ersoy Y, Baysal O, Dogan E. Postural stability in patients with ankylosing spondylitis. 2010; 32: 1156–1162.









- [3] Vergara ME, Shea FDO, Inman RD, Gage WH. Clinical Biomechanics Postural control is altered in patients with ankylosing spondylitis. JCLB. 2012; 27(4): 334–340.
- [4] Nunzio AM, Zincarelli C, Nunzio AM, Iervolino S, Zincarelli C, Gioia LD, ... Pappone N. Ankylosing Spondylitis and Posture Control: The Role of Visual Input. Biomed Res In. 2015; 948674.





