AXIAL SPONDYLOARTHRITIS POSTURE ASSESSMENT USING INERTIAL SENSORS

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Background: Axial Spondyloarthritides (axSpA) often causes spinal deformity in patients, mostly a flexed kyphotic posture. In the early stages a flattening of the lumbar spine or reduced lordosis may become apparent. Kyphosis of the thoracic and cervical spine is also common in severe cases, resulting in an increased 'tragus to wall distance' as clinically assessed in the BASMI score. No other measurement related to posture is routinely recorded in clinical practice.

Methods: 20 axSpA patients and 20 healthy age, BMI and sex matched controls, were recruited. An IMUs system (ViMove©) was used to obtain angles at key anatomical regions where the sensor is located.

Objective: To compare the spinal curvature of axSpA and healthy individuals to analyse if there are any significant differences between them and to correlate these with conventional assessment variables.

Results: Results in degrees (standard deviation). Pearson correlations: *p<0.05; **p<0.01; ***p<0.001

Results: Greater values of posture angles were obtained in healthy controls. Despite this, differences where significant (p<0.05) only for Lordosis and Cervical Posture. Lordosis angle shown a good correlation with mobility measured by Schöber and by IMU system, especially for flexion movements. Pelvis angle correlates better than L1 angle with all mobility variables. For cervical angles, occiput angle appears to be the best indicator for functional assessment. Thoracic angle is very similar between patients and healthy subjects. Figure represents the location of sensors with mean angles obtained by healthy group and the worst patient of axSpA group.

Abstract AB0867 – Figure 1

Conclusions: IMU based sensors are a useful new tool for the assessment of axSpA patients. This is the first formal evaluation of posture in axSpA and seems to be a promising tool in the functional evaluation of axSpA patients. More studies (reliability, feasibility, sensitivity to change, etc.) are needed for validating these measures.

Acknowledgements: This study has been funded by FOREUM, University of Cordoba Research Program and Junta de Andalucía (CS-S0029/2016).

Disclosure of Interest: None declared


LUMBAR MUSCLES STIFFNESS IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS IS ALTERED IN COMPARISON WITH HEALTHY SUBJECTS

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Background: Axial Spondyloarthritides (axSpA) patients have inflammation and/or structural damage in the lumbar spine that reduces their mobility and quality of life. The biomechanical features of axSpA have not been investigated in detail, but could prove to be a very important factor contributing to pain, stiffness and
Conclusions: axSpA increases lumbar muscle stiffness with respect to healthy individuals. Muscle stiffness, as measured by myotonometry, was related to loss of movement and this could be contributing to a loss of function independently of structural damage and inflammation in axSpA. These new outcome measures could be helpful for understanding the evolution of the disease and for the functional assessment.

Acknowledgements: This study has been funded by Foreum, the XXI University of Cordoba Research Program and Junta de Andalucía (CS-S0029/2016).

Disclosure of Interest: None declared


AB0870

THIRTEEN-YEAR CLINICAL FOLLOW-UP OF SPONDYLOARTHRITIS PATIENTS: DATA FROM THE REGISPONSER DATABASE

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Objectives: To describe the clinical characteristics of the SpA patients included in the REGISPONSER database during 13 years of follow-up, regarding the evolution of the clinical manifestations and the treatment used.

Methods: An observational and analytical study of a retrospective cohort was carried out, in which 78 patients were analysed at the Reina Sofia University Hospital of Córdoba for the first time in the year 2004/05. The last visit registered was reviewed during the years 2016/17. Data about his clinical condition, including the evolution of the clinical manifestations and the treatment used.

Results: Seventeen out of 78 SpA patients included in the registry were lost. The characteristics of this cohort are shown in table 1. Recurrence of uveitis was observed in 10 out of 14 (71.4%) patients (p<0.001), with a low recurrence at the end of the follow-up (5%). At the time of inclusion, uveitis was not present in 45 SpA patients, however it was present in 8 of them (17.8%) during follow-up. Three out of the 15 patients who had history of lower limbs peripheral arthritis in the first registry, presented new flares at the end of the study, showing a low level of recurrence (3%). During follow-up, enthesitis was present in 8 out of 45 SpA patients (17.8%) who didn’t have a previous history of enthesitis. In addition, only one episode of dactilitis was detected from the 55 SpA patients who didn’t have a previous history of dactilitis. The last CRP value was mean of 5.90 (6.13) mg/dL. Besides three patients required placement of a hip prosthesis during follow-up. After last visit, we found a response to NSAIDs in 54 patients (88.5%), 33 of them (61.1%) with daily treatment. Biological therapy was present in 25% of the patients, 15 showing a mean time of 18.8 (7.4) years from the appearance of the first symptoms until their indication. A good response was achieved in 50% of