AB1005  ASSOCIATION BETWEEN CHANGES IN SERUM ALKALINE PHOSPHATASE LEVELS AND RADIOGRAPHIC PROGRESSION INankylosing spondylitis

Keywords: Biomarkers, Prognostic factors, Spondyloarthritis

T. H. Kim1, S. Y. Park2, J. H. Shin3, S. Lee4, K. B. Joo5, B. S. Ko6, 1Hanyang University Hospital for Rheumatic Diseases, Department of Rheumatology, Seoul, Korea, Rep. of (South Korea); 2Korea National Open University, Department of Statistics and Data Science, Seoul, Korea, Rep. of (South Korea); 3Hanyang University Hospital for Rheumatic Diseases, Department of Radiology, Seoul, Korea, Rep. of (South Korea); 4Inje University Seoul Paik Hospital, Inje University College of Medicine, Department of Internal Medicine, Seoul, Korea, Rep. of (South Korea)

Background: The changes in bone metabolism may occur earlier than those that can be identified on radiography. Although studies have evaluated the changes in inflammatory markers that precede radiographic progression, no studies have evaluated the relationship between the timing of changes in bone metabolism and radiographic progression in patients with AS.

Objectives: To determine the relationship between serum alkaline phosphatase levels and radiographic changes over time in ankylosing spondylitis.

Methods: This retrospective study evaluated the electronic medical records of patients with ankylosing spondylitis between January 2001 and December 2018. Longitudinal data including serum alkaline phosphatase levels were imputed by linear interpolation at 3-month intervals. Among the serum alkaline phosphatase levels for 8 years prior to measurement of the modified Stoke Ankylosing Spondylitis Spinal Score, the serum alkaline phosphatase level having the highest beta coefficient with the modified Stoke Ankylosing Spondylitis Spinal Score was selected. Linear mixed models with the selected serum alkaline phosphatase levels and the modified Stoke Ankylosing Spondylitis Spinal Score were investigated. In the linear mixed model including clinical variables, the serum alkaline phosphatase level in the previous 5 years and 3 months showed the highest beta coefficient with the modified Stoke Ankylosing Spondylitis Spinal Score (Figure 1).

Results: Overall, 1122 patients were included, with a mean follow-up period of 8.20 (standard deviation: 2.85) years. Of the series of serum alkaline phosphatase levels, the level in the previous 5 years and 3 months showed the highest beta coefficient with the modified Stoke Ankylosing Spondylitis Spinal Score (Figure 1). In the linear model including clinical variables, the serum alkaline phosphatase level in the previous 5 years and 3 months before radiographic changes was significantly associated with the modified Stoke Ankylosing Spondylitis Spinal Score (β=0.021, 95% confidence interval: 0.017–0.025, p<.001). The majority of studies were cross-sectional (n=12) followed by review articles (n=10 including one systematic review), and finally cohort studies (n=5 prospective and 1 retrospective). Mean disease duration range was 70-31 years. Average age of participants was 30.6 to 57.2, and majority were males (57.1-100%). The most common pulmonary manifestation (40-90%) was pleuroparenchymal abnormalities noted on high resolution CT scan (HRCT) which followed abnormal pulmonary function tests (PFTs) (15-57%), chest wall movement restriction (n=54) and pleural effusion (n=54), and obstructive sleep apnea (n=54). The most common pulmonary manifestation was interstitial lung disease (50-90%) with a diagnosis of AS rather than axSpA. The majority of studies were cross-sectional (n=12) and included clinical variables, with a diagnosis of AS rather than axSpA.

Conclusion: Serum alkaline phosphatase levels measured at approximately 5 years before may be a surrogate marker for predicting spinal radiographic changes. Long-term prospective clinical and experimental studies of >5 years are required for biomarker discovery or therapeutic research on the radiographic progression of ankylosing spondylitis.

Figure 1. Beta coefficients of ALP levels to calculate the modified Stoke Ankylosing Spondylitis Spinal Score (mSASSS). ALP levels 5 years and 3 months before measured mSASSS had the highest significant beta coefficient (0.020, 95% CI 0.016–0.023) with mSASSS (asterisk). mSASSS, the modified Stoke Ankylosing Spondylitis Spinal Score; ALP, alkaline phosphatase.

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Disclosure of Interests: None Declared.

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Methods: Pain in patients with AS.

Objectives: The prevalence of NP in AS is a common phenomenon. NP according to the LANSS was assessed in 49 (54.8%) patients extra-articular symptoms appeared before SpA. The median disease duration since SpA diagnosis was 11 year (IQR 14). Median time for SpA diagnosis since articular symptoms onset was 2 years (IQR 8). The median time from the extra-articular symptoms until the appearance of articular symptoms was 2 years (IQR 30). The associations of SpA features and time since first extra-articular symptoms until articular symptoms appearance is detailed in table 1. HLA-B27 positivity and axial disease showed a negative linear association while peripheral disease showed a positive linear association.

Background: Little is known about the chronic order of appearance of extra-articular symptoms and spondyloarthritis (SpA) symptoms and its effect in disease progression. Most information is based on population-based registries or big data that may lack precision.

Methods: A retrospective cohort study was conducted. Inclusion criteria were patients that met ASAS criteria visited at the SpA clinic between July – October 2022. Other autoimmune rheumatic diseases were excluded. Data were collected previously reviewing patient records available from the electronic and paper database of the hospital. Additional information was retrieved by the shared medical history database of the Catalan Institute of Health which attends the 99.2% of the population. Missing data were collected prospectively by patient interview. Univariate linear regression was conducted to study association.

Results: From 91 patients 54 (59.3%) were male and mean age was 63.9 (SD 14.3). There were 46 (50.5%) patients with exclusively peripheral SpA and 17 (16.5%) exclusively axial SpA. History of extraarticular symptoms were observed in 69 (76.6%) of the patients and 33 (37.1%) were HLA-B27 positive. In 49 (54.8%) patients extra-articular symptoms appeared before SpA. The median disease duration since SpA diagnosis was 11 year (IQR 14). Median time for SpA diagnosis since articular symptoms onset was 2 years (IQR 8). The median time from the extra-articular symptoms until the appearance of articular symptoms was 2 years (IQR 30). The associations of SpA features and time since first extra-articular symptoms until articular symptoms appearance is detailed in table 1. HLA-B27 positivity and axial disease showed a negative linear association while peripheral disease showed a positive linear association.

Table 1. Review of the literature shows that the order of appearance of extra-articular symptoms in patients with AS is irregular. The median time delay since first articular symptoms until SpA diagnosis was 2 years. Long-term evidence between extra-articular manifestation and articcular symptoms was linearly associated with peripheral disease.

Axial disease and HLA-B27 were linearly associated with shorter time between the two symptoms.

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AB1009 INVERSE CORRELATION BETWEEN NONHDL CHOLESTEROL AND INFLAMMATORY BOWEL DISEASE IN SPONDYLOARTHRITIS: A NEW LIPID PARADOX

Keywords: Comorbidities, Spondyloarthritis, Cardiovascular disease

J. Rubio Ubeda1, 2, A. Peña-Almagro1, 3, L. Salvatierra Velasco1, 2, E. Raya1, J. Salvatierra1, 2, 3Hospital Universitario Clínico San Cecilio, Rheumatology, Granada, Spain

Background: In Spondyloarthritis (SpA) a higher prevalence of cardiovascular comorbidities has been observed, such as diabetes mellitus (DM), arterial hypertension (AH), dyslipidemia (DLP), obesity and metabolic syndrome [1].