



ORAL PRESENTATION

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# PReS-FINAL-2185: Prognostic markers in juvenile vs. adult-onset ankylosing spondylitis

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## Introduction

Patients experiencing ankylosing spondylitis (AS) symptoms  $\leq 16$  years-of-age are classified as juvenile-onset AS (JoAS), whilst those  $\geq 17$  years-of-age adult-onset AS (AoAS). Studies from North America, China and Turkey suggest that JoAS and AoAS patients have differing clinical characteristics and functional outcomes; although results have been inconsistent.

## Objectives

This study compared JoAS vs. AoAS with respect to clinical, functional and genetic outcomes, and determined which factors were related to prognosis, as defined either by a poor BASFI ( $\geq 5$ ) or by a history of AS-related surgery.

## Methods

143 JoAS were compared with 413 AoAS patients attending a secondary care rheumatology hospital.

A diagnosis of AS was made using the 1987 modified New York criteria. The following clinical parameters were recorded: sex; age at symptom onset (JoAS only); age at Rheumatologist-made diagnosis; the most recent BASFI, BASDAI, BASMI; *HLA-B27* genotype status; the occurrence at any time point of psoriasis, uveitis, enthesitis, inflammatory bowel disease (IBD) or AS-related surgery (hip, shoulder or spinal).

Two group comparisons were made with continuity-corrected Chi-squared, unpaired Student's t-tests and non-parametric Mann-Whitney U-tests. Logistic regression was used to adjust for time since diagnosis.

## Results

At assessment, JoAS cases were slightly younger than AoAS cases (mean age 49.0 vs. 51.9 years; mean difference in age 2.9 years, 95% CI 0.3-5.6 years). JoAS cases

had a slightly longer mean disease duration since diagnosis than AoAS cases (26.0 years vs. 19.3 years).

JoAS cases were more likely to have had AS-related surgery than AoAS (18.9% vs. 8.0%, respectively;  $p < 0.001$ ; or  $p = 0.017$  after adjustment for time from diagnosis), and slightly more had had concurrent IBD (11.2% vs. 6.8%;  $p = 0.13$ ).

No statistically significant difference was found between the two groups in terms of BASFI, ten BASFI domains, BASDAI, BASMI, sex distribution, *HLA-B27* positivity, psoriasis, enthesitis, or uveitis (all cases or *HLA-B27* positive cases only).

JoAS cases with psoriasis were more likely to have a poor BASFI ( $\geq 5.0$ ) than those without psoriasis (55% vs. 25%;  $p = 0.016$ ), and were also more likely to have had AS-related surgery than those without psoriasis (43% vs. 15%;  $p = 0.006$ ).

JoAS cases with a poorer BASFI showed a trend for symptom onset at a younger age than those with a better BASFI ( $< 5.0$ ) (mean age 12.5 vs. 13.4;  $p = 0.08$ ). Similarly, JoAS cases having had AS-related surgery showed a trend for symptom onset at a younger age than those without surgery (mean age 12.5 vs. 13.3; trend  $p = 0.18$ ).

## Conclusion

This study is the first to investigate a Northern-European population of Rheumatologist-diagnosed JoAS patients, and is the largest sample of prospectively-collected JoAS data published. JoAS and AoAS patients differed in terms of proceeding to AS-related surgery, and occurrence of IBD. In JoAS, younger age at symptom onset and occurrence of psoriasis, related to poorer prognosis. Delayed diagnosis of JoAS didn't correlate with prognosis.

## Disclosure of interest

None declared.

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