

more enthesitis and peripheral arthritis. Enthesitis is initiated during a mechano-sensation and the cultural difference including style of footwear could probably be one of the factors explaining our findings inflammatory back pain has been reported to be higher in Indians compared to Caucasians which could be due to life style

The fact that ASDAS CRP behaves similarly in Indian patients across the two countries and is more when compared to Caucasians might point towards overall higher burden of disease in Indian population

To our knowledge this is a first study comparing clinical manifestations of SpA between Indians and Caucasians

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### SUSTAINED ASDAS-CRP REMISSION IS ASSOCIATED WITH BETTER LONG-TERM FUNCTIONAL OUTCOMES: A REAL-LIFE ANKYLOSING SPONDYLITIS COHORT STUDY

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**Background:** Ankylosing spondylitis (AS) leads to back pain and structural damage that may result in functional impairment<sup>1</sup>. Function is usually assessed in clinical trials conducted in developed countries, with patients receiving biological therapy<sup>2,3</sup>.

**Objectives:** To evaluate variation in the Bath Ankylosing Functional index (BASFI) over time in a AS cohort followed in a developing country. Compare the improvement in BASFI between patients achieving or not sustained ( $\geq 12$  months) ASDAS-CRP remission/low disease activity (LDA). Analyze predictors for achieving a minimum clinically important improvement (MCII) in BASFI ( $\Delta$ BASFI  $\leq -0.6$ )<sup>4</sup>.

**Methods:** This cross-sectional analysis was conducted in a retrospective cohort. Adult patients fulfilling the New York criteria for AS and followed during at least 5 years in the Spondyloarthritis clinic were included. BASFI variation ( $\Delta$ BASFI) was described as median (25<sup>th</sup>/75<sup>th</sup>). Comparison of  $\Delta$ BASFI between patients fulfilling or not sustained ASDAS-CRP remission/LDA was done using the Mann-Whitney test. Hierarchical Poisson model was used to identify predictors for achieving a MCII in BASFI.

**Results:** 69 patients were analyzed, 53.6% were men, the mean age was 48.9 $\pm$ 11.4 years, and the mean follow-up time was 6.1 $\pm$ 0.5 years, median (25<sup>th</sup>/75<sup>th</sup>) disease duration of 10 (5-18) years; 14.5% of the patients were on biological therapy at baseline. The median (25<sup>th</sup>/75<sup>th</sup>)  $\Delta$ BASFI was low: -0.1 (-1.9 /+1.1) but 46.4% (N= 32) presented a MCII in BASFI during follow-up. Patients who achieved sustained ASDAS-CRP remission/LDA had a significant improvement in BASFI over time compared with those who did not achieve this target (p=0.026) (Figure 1). Patients with higher BASFI scores at baseline had a greater probability of achieving a MCII in BASFI (RR1.13 95%CI 1.00-1.27 p=0.047). Achieving and maintaining ASDAS-CRP remission/LDA during at least 12 months increased in 82% the probability to obtain a MCII in BASFI (RR 1.82 95% CI 1.14-2.91, p=0.012).

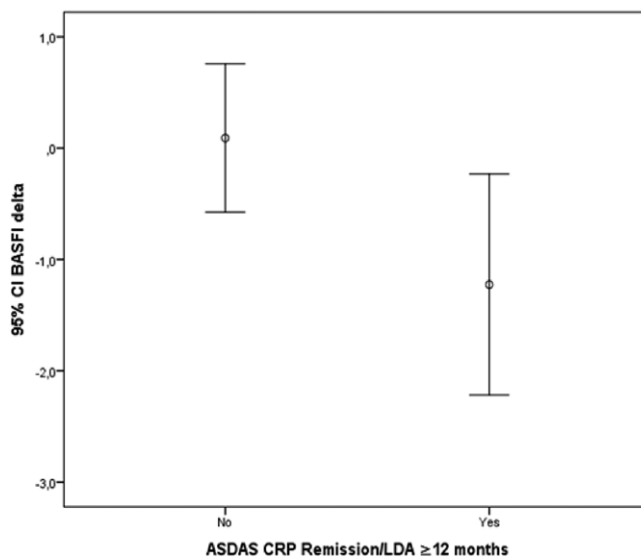
**Conclusion:** Patients achieving sustained ASDAS-CRP remission/LDA had better functional outcomes over time compared to those not achieving this target. Higher BASFI scores at baseline and sustained ASDAS remission/LDA were predictors of a MCII in BASFI.

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**Figure 1.** Comparison of  $\Delta$ BASFI between patients who achieved or not sustained ASDAS-CRP remission/LDA.

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### THE PATH OF A PATIENT WITH AXIAL SPONDYLOARTHRITIS TO DIAGNOSIS IN RUSSIA, DATA FROM THE EMAS SURVEY

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**Background:** Scientific research in axial spondyloarthritis (axSpA) over the recent years has grown significantly. Early detection, diagnosis and treatment are critical to improve the functioning situation, reduce comorbidities and loss of quality of life of patients with axSpA. However, the diagnostic delay remains high.

**Objectives:** To describe the path to diagnosis among Russian axSpA patients.

**Methods:** The European Map of Axial Spondyloarthritis (EMAS) was a cross-sectional on-line survey of unselected patients with self-reported axSpA conducted in 13 European countries. Russian participants were recruited between December 2017 and February 2018 through the Russian Ankylosing Spondylitis Association and an online panel. Socio-demographics, age at symptom onset, age at diagnosis, diagnostic tests performed, HCPs visited prior diagnosis, and diagnosing HCP were collected. Diagnostic delay was calculated by subtracting the age at symptom onset from age at diagnosis.

**Results:** 233 Russian participants were enrolled. The mean age was 36.7±9.1 years, 51.9% were female. The average duration of the disease was 12.4±9.5 years. 54.9% patients visited more than one specialist before diagnosis. Russian respondents reported a low demand for GPs, physiotherapist and an orthopaedic specialist in contrast to the total of EMAS participants (table 1). AxSpA was most frequently diagnosed by a rheumatologist (87.5%).

**Table 1. Health professional visited before being diagnosed with axSpA.**

	Russian population N=233	Pan-European population N=2706
	%	%
GP	67.81	83.4
Rheumatologist	44.21	66.1
Other	37.34	13.6
Orthopaedic specialist	23.61	34.5
Physiotherapist	17.6	46.0
Osteopath	13.73	16.3

Most used medical test for diagnosis are similar to those used in the aggregated Pan-European sample (table 2).

**Table 2. Medical tests made to diagnose axSpA.**

	Russian population N=230	Pan-European population N=2661
	%	%
X-rays	80.87	72.3
MRI scan	70.00	64.3
HLA B27	62.61	65.4
CT scan	25.22	20.8
Ultrasound scan	17.83	21.0
Radionuclide scintigraphy	3.5	16.4
Other	9.13	4.2

Among those who underwent HLA-B27 test (n=144), 87.23% declared to be HLA-B27 positive. This percentage is higher than that found in the Pan-European aggregated sample (73.95% of HLA-B27 positive).

The mean age at symptom onset was 24.22±9.75 years. Consequently, the mean diagnostic delay calculated was 6.88±6.94 years without differences between males and females and the median was 5 years. More than half of the sample had a calculated diagnostic delay of higher than 5 years (55.39%).

**Conclusion:** The results of the survey confirm the existence of a diagnostic delay. Although this aspect has been greatly improved in recent years, reducing diagnostic delay is one of the major challenges associated with the clinical management of axSpA and must be addressed with GPs and rheumatologists. We suggest that features in patient routing in other countries can be explained these differences: the survey did not include a neurologist, to whom patients with back pain have a visit in Russia. The most frequently performed medical tests are included in the ASAS criteria for axSpA, which indicates a good knowledge of doctors.

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**PERFORMANCE OF DIFFERENT CRITERIA SETS FOR INFLAMMATORY BACK PAIN IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS IN DEMOCRATIC REPUBLIC OF CONGO**

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**Background:** Inflammatory back pain (IBP) is the most prominent clinical feature for an early diagnosis of axial spondyloarthritis. The performance of the criteria sets for IBP has not yet been assessed in clinical practice in the Democratic Republic of Congo (DRC).

**Objectives:** To assess and to compare the performance of different IBP criteria sets in axial spondyloarthritis (SpA) outpatients attending the rheumatology unit of the University Hospital of Kinshasa, DRC.

**Methods:** One hundred and eight Congolese outpatients with axial SpA defined by rheumatologist's clinical judgment were included in the spondyloarthritis cohort of the University Hospital of Kinshasa from March 1<sup>st</sup> 2015 to February 28, 2017. Calin criteria, Berlin criteria and ASAS criteria sets for IBP were performed to assess their performance against clinical judgment. Detailed history, clinical examination and imaging of sacroiliac joints by plain radiography were obtained. Sacroiliac joint radiographic lesions were scored with the modified New York criteria. Magnetic resonance imaging and HLA B27 were not performed. Fifty additional patients with a diagnosis of chronic (>3 months) mechanical low back pain (MLBP) were included as control group. The performance of each item and different criterias was evaluated using sensitivity, specificity, and likelihood ratio (LR). Baseline characteristics of the mechanical and inflammatory back pain cohorts were compared with chi-square or Student t tests as appropriate.

**Results:** The mean age was 43.8±15.1 years in SpA patients versus 62.4±9.1 years in controls (MLBP patients) with respective sex ratio (M/F) of 1/0.8 and 1/2.1. There were significantly more male patients in the ankylosing spondylitis (AS) group than in the non-radiographic axial spondyloarthritis group (p<0.01). Among the criteria sets, Calin criteria showed the best sensitivity (92.6%) while the Berlin criteria showed the best specificity (97.6%) in the detection of IBP patients. The new ASAS criteria for IBP compared to the two previous criteria sets did not show good sensitivity nor specificity (sensitivity 80%, specificity 62%, LR+ 1.05 (0.90 – 1.22), LR- 0.52 (0.39 – 0.69), 95%CI).

**Conclusion:** The Calin criteria set would be useful for epidemiological and clinical studies in DRC. The ASAS criteria set for IBP is not better than other criteria sets in the screening of IBP for Congolese patients with axSpA.

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