Background: Sacroiliac radiographs in axial spondyloarthritis (axSpA) allow the evaluation of sacroiliac and hip joint involvement, as well as the symphysis region and ischial enthesis regions. In this study.
Objectives: It is planned to test and review the relationship between the presence of ischial enthesitis and disease-related factors, the presence of peripheral enthesitis and other radiological features of involvement.
Methods: Of 355 patients with axSpA diagnosis and follow-up sacroiliac joint radiography evaluated for ischial enthesitis were included in the study. Since the presence of ischial enthesitis was detected in 1 patient in non-radiographic axSpA patients, the analysis was performed with radiographic axSpA patients. Demographic, clinical and laboratory characteristics of the patients were recorded. Irregular appearance in the region where tendons and ligaments attach to the bone (lower region) in the pubic arms in the sacroiliac joint X-ray was evaluated as ischial enthesitis. Radiological evaluation was performed by a rheumatologist (EDE) and a radiologist (AS). The relationship between the presence of ischial enthesitis and other factors was tested with both univariate and multivariate analysis methods.
Results: The mean age at diagnosis (±SD) was 42 (11.9) and 74% of the patients included in the study were male. Demographic and radiological characteristics of the study group are summarized in Table 1. Ischial enthesitis was detected in 57 (16.1%) patients. Gender (p=0.006), symptom duration (p<0.001), duration of diagnosis (p=0.002), HLA-B27 positivity (p=0.09), radiographic hip involvement (p=0.09) total sacroiliac joint score (p<0.001), baseline cervical mSASS score (p<0.001), basal lumbar mSASS score (p<0.001), presence of symphysis (p<0.001), serum CRP level (p=0.014) found to be associated with ischial enthesitis in univariate analysis. There was no correlation between the presence of ischial enthesitis and heel pain (p=0.61) or SPARCC enthesitis score (p=0.59). In the two models established in the multivariate analysis, serum CRP level (p=0.022), presence of cervical syndesmophyte (p=0.042), presence of total ankylosis in the sacroiliac joint (p=0.012) and SIE score (p=0.001) were found to be independent variables associated with the presence of ischial enthesis.
Conclusion: Although ischial enthesitis can be seen independently of clinical heel pain in axSpA patients, it can also be an indicator of radiographic damage.

Table 1. Demographic and radiological characteristics of axSpA patients

All patients (n=355)		İschial enthesitis(+) (n=57)	İschial enthesitis (-) (n=298)	p
Age at diagnosis, mean (SD)	42.0 (11.9)	35.3 (11.9)	35.2 (12.5)	0.99
Sex, male, %	74	88.9	71.3	0.006
HLA-B27 positivity,%	65.1	82.2	61.7	0.010
Duration of symptoms, median (IQR)	13 (13)	20 (12)	12 (14)	<0.001
SIE score, median (IQR)	6 (3)	8 (1)	6 (3)	<0.001
SIE ankylosis, %	33.5	68.4	26.8	<0.001
Servical mSASS score, median (IQR)	0 (8)	9 (18)	0 (4)	<0.001
Servical syndesmophitis (+), %	43.4	77.8	35.5	<0.001
Lumbal mSASS score, median (IQR)	0 (4)	6 (30)	0 (0)	<0.001
Lumbal syndesmophitis (+), %	29.0	55.8	24.4	<0.001
Hip involvement, %	15.9	38.2	11.8	<0.001
Serum CRP level, median (IQR)	10 (20)	14 (29)	9 (19)	0.014

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AB1030

FACTORS ASSOCIATED WITH CERVICAL INVOLVEMENT PROGRESSION IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

Keywords: Spondyloarthritis

E. Durak Ediboglu[1], A. Sinci[2], D. Solmaz[3], E. Erpek[3], H. Cinakli[3], G. Alp[3], E. Otman Akat[3], A. Özkan[3], İ. Kurut Aysin[3], H. Kocaayan[3], M. Ozmen[3], S. Akar[3]. *[1]Hatay Training and Research Hospital, Department of Internal Medicine, Division of Rheumatology, Izmir, Turkey*; *[2]Izmir Katip Çelebi University, Department of Radiology, Izmir, Turkey*; *[3]Izmir Katip Çelebi University, Department of Internal Medicine, Division of Rheumatology, Izmir, Turkey*

Background: The evaluation of cervical, lumbar spinal structures and hip joint has been important and this is reflected in the variables in the scoring systems in patients with axial spondyloarthritis.
Objectives: In this study, it was aimed to investigate the factors affecting cervical spinal progression.
Methods: The patients with the diagnosis of axSpA who were followed-up at least two years, and whose cervical mSAS scores were evaluated by servical X-ray were included in the study. A change of 1 unit or more in the modified Stoke Ankylosing Spondylitis Spine score (mSASS) between two radiographs taken at least two years apart was considered progression. Radiological evaluation was done by a rheumatologist (EDE) and a radiologist (AS). Demographic, clinical and laboratory characteristics of the patients were recorded. The relationship between the presence of cervical progression and other factors was tested with both univariate and multivariate analysis.
Results: Of the 237 patients included in the study, 62% were male and the median age at diagnosis (IQR) was 33 (14) and 68.8% of the patients were radiographic axSpA. The demographic, clinical and laboratory characteristics of the study groups were summarized in Table 1. Cervical progression was detected in 42 of the patients (17.7%) with cervical radiography in the median (IQR) 3 (2) follow-up period. Presence of cervical progression was related with symptom duration (p=0.004), age at symptom onset (p=0.011), age at diagnosis (p<0.001), presence of total ankylosis in sacroiliac joint X-ray (SIE score=8) (p<0.001), cervical mSAS score (p<0.001), total SSI score (0-8) (p<0.001), baseline cervical mSAS score (p<0.001), presence of cervical syndesmophyte (p<0.001), baseline lumbal mSAS score (p<0.001), the presence of lumbal syndesmophyte (p<0.001). Cervical progression was not associated with HLA-B27, smoking, presence of either extramusculoskeletal or peripheral involvement, baseline disease activity scores (BASDAI, ASDAS-CRP). In two different models were established in multivariate analysis, age at diagnosis(p<0.001), presence of cervical syndesmophyte (p=0.014), sacroiliac joint score (p=0.004) were associated with cervical progression.
Conclusion: It should be kept in mind that the age at diagnosis, presence of spinal involvement and sacroiliac joint score may be predictors of cervical spinal progression in the follow-up of patients in axSpA.

Tablo 1. AxSpA hastalarının demografik ve radyolojik özellikleri

	All patients	Servical progression (+)	Servical progression (-)	p
Age at diagnosis, mean (SD)	33 (14)	40 (19)	32 (13)	<0.001
Sex, male, %	62.0	76.2	58.9	0.037
HLA-B27 positivity,%	63.3	68.6	62.1	0.56
Symptom duration, median (IQR)	10 (12.3)	15 (15)	10 (11)	0.004
mNY positivity, %	68.8	88.1	64.6	0.03
Total SİE score, median (IQR)	5 (5)	7 (2.3)	4 (4)	<0.001
Baselinel servical mSASS score, median (IQR)	0 (2)	6 (15)	0 (0)	<0.001
Bazal lumbal mSASS score, median (IQR)	0 (0)	0 (18)	0 (0)	<0.001
SIE ankylosis, %	24.1	52.4	17.9	<0.001
Servical syndesmophyte, %	30.7	73.8	20.8	<0.001
Lumbal syndesmophyte, %	16.3	48.6	9.6	<0.001

Table 2. Factors associated with presence of servical spinal progression

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AB1031

ENDOTHELIAL DYSFUNCTION AND SUBCLINICAL ATHEROSCLEROSIS IN RADIOGRAPHIC AND NON-RADIOGRAPHIC AXIAL SPONDYLOARTHROPATHY

Keywords: Comorbidities, Cardiovascular disease, Spondyloarthritis

M. H. Abu-Zaid[1], N. F. Darwish[1], S. A. A. Tabra[1]. *[1]*Tanta University. Faculty of Medicine, Rheumatology and Rehabilitation, Tanta, Egypt

Background: Axial spondyloarthritis (axSpA) is a chronic inflammatory disease which includes radiographic subtype [ankylosing spondylitis (AS)], and non-radiographic subtype (nr-axSpA)[1]. Chronic inflammatory disorders, such as axSpA, are associated with increasing cardiovascular (CV) risk which is mainly due to the inflammatory burden[2].
Objectives: Evaluation of endothelial dysfunction and subclinical atherosclerosis in axSpA and comparison between in AS and nr-axSpA regarding disease activity, functional status and Subclinical atherosclerotic disease.
Methods: Eighty Patients fulfilling the ASAS classification criteria plus 60 healthy individuals were included in this study. Patients were divided into two groups;

50 patients with AS (GI) and 30 patients with nr-axSpA (G II), while G III was the control group. Patients with nr-axSpA were defined as the absence of definite sacroiliac (SI) joint changes on plain radiograph but with active sacroiliitis on MRI and at least one of the characteristic traits of SpA according to the 2009 ASAS criteria[3]. Demographic data, duration of the disease, delay in diagnosis, extra-articular manifestations, smoking, comorbidities and detailed medication history were taken. Disease activity were assessed by Ankylosing Spondylitis Disease Activity Score (ASDAS) and Bath Ankylosing Spondylitis Disease Activity Index (BASDAI). Physical function was assessed by the Bath Ankylosing Spondylitis Functioning Index (BASFI) & patient-reported outcome measures (PROMs). Serum endothelin-1 and carotid intima-media thickness (cIMT) were measured to assess endothelial dysfunction and subclinical atherosclerosis.

Results: There was no significant difference between the GI & GII regarding age and gender (p>0.05), while AS patients had longer mean disease duration than nr-axSpA (6.6 years vs 3.7 years, P < 0.001). Forty-eight patients out of 50 in G I were receiving biological therapy while 23 patients from 30 in G II were receiving biological therapy with significant difference between the two groups (p=0.02). There were no significant differences between GI and GII regarding comorbidity, and smoking status (p>0.05). Regarding disease activity; we found no significant difference between GI and GII in ASDAS-CRP (2.0±0.9, & 2.2±1.02 respectively), also there was no significant difference between GI and GII in ASDAS (3.9±1.3, & 4.1±1.1 respectively). There was no notable differences between the AS and nr-axSpA neither in BASFI nor in PROMs (p>0.05). The serum endothelin-1 was significantly elevated in both patients' groups when compared with controls (GI: 2.3±1.5, GII: 2.05±1.3, controls: 0.76±0.5) with no significant difference between GI and GII (p>0.05). When we measured cIMT we noticed a significant increase in the thickness of cIM of patients in comparison with controls (P < 0.01), while there was no significant difference between the AS and nr-axSpA (p>0.05). We found 6 AS patients had atheromatus plaque, while 4 patients had atheromatus plaque in nr-axSpA group with no significant difference between the 2 groups (p= 0.86) There was positive correlation between endotheline-1, cIMT and both ASDAS-CRP & BASFI.

Conclusion: Axial spondyloarthritis patients (either AS or nr-axSpA) had higher risks for endothelial dysfunction and subclinical atherosclerosis. patients with AS & nr-axSpA shared a comparable disease activity, functional disability and endothelial dysfunction.

REFERENCES:

[1] Mease PJ, Heijde DV, Karki C, et al. Characterization of Patients With Ankylosing Spondylitis and Nonradiographic Axial Spondyloarthritis in the US-Based Corrona Registry. Arthritis Care Res (Hoboken). 2018;70(11):1661-1670.

[2] González Mazón I, Rueda-Gotor J, Ferraz-Amaro I, et al. Subclinical atherosclerotic disease in ankylosing spondylitis and non-radiographic axial spondyloarthritis. A multicenter study on 806 patients. Semin Arthritis Rheum. 2021;51(2):395-403.

[3] Akgul O, Ozgocmen S. Classification criteria for spondyloarthropathies. World J Orthop. 2011 18;2(12):107-15.

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AB1032

COURSE OF AORTIC REGURGITATION IN ANKYLOSING SPONDYLITIS – A FOLLOW-UP STUDY OF 52 PATIENTS EXAMINED WITH ECHOCARDIOGRAPHY

Keywords: Heart, Spondyloarthritis

K. Bengtsson[1,2], G. Mourtzinis[3,4], A. Deminger[1,2], E. Klingberg[1,2], M. Scharin Täng[3], L. T. H. Jacobsson[1], L. Bergfeldt[3,5], H. Forsblad-D'elia[1,2]. [1]*Institute of Medicine at Sahlgrenska Academy, University of Gothenburg, Department of Rheumatology and Inflammation Research, Göteborg, Sweden*; [2]*Region Västra Götaland, Department of Rheumatology, Sahlgrenska University Hospital, Göteborg, Sweden*; [3]*Institute of Medicine at Sahlgrenska Academy, University of Gothenburg, Department of Molecular and Clinical Medicine, Göteborg, Sweden*; [4]*Region Västra Götaland, Department of Medicine and Emergency, Sahlgrenska University Hospital, Mölndal, Sweden*; [5]*Region Västra Götaland, Department of Cardiology, Sahlgrenska University Hospital, Göteborg, Sweden*

Background: Ankylosing spondylitis (AS) is associated with cardiac manifestations such as aortic regurgitation. However, contemporary follow-up studies are lacking.

Objectives: To investigate the course of aortic regurgitation and proximal aortic root diameter in patients with AS examined with echocardiography at baseline (2009-2011) and at follow-up (2014).

Methods: At baseline, 187 patients with AS (56% men, mean age 50 years) were examined with echocardiography, of whom 34 (18%) had an aortic regurgitation of mild to severe grade[1]. Of these 34 patients, 26 agreed to participate in a follow-up with echocardiography in 2014. In addition, we re-assessed 26 sex- and age-matched patients from the same AS cohort, but without aortic regurgitation at baseline. The presence and severity of aortic regurgitation (none, mild, moderate, severe) as well as the proximal aortic root diameter were assessed. Related-samples Wilcoxon signed rank test was used to analyze the change (Δ) in aortic root diameter from baseline to follow-up, divided by patients with and without aortic regurgitation at baseline and stratified by sex. Mann-Whitney U test was used to compare the Δ aortic root diameter in patients with and without an aortic regurgitation at baseline.

Results: In total 52 patients (54% men, mean age (SD) 62 (11)) were re-examined in 2014. The time between the baseline and follow-up echocardiography examination ranged between 3.0 to 4.7 years with a median of 4.3 years. There were no statistically significant differences in aortic root diameter between baseline and follow-up as shown in Table 1. The distribution of Δ aortic root diameter was not statistically different in patients with an aortic regurgitation at baseline compared to the patients without. The change in aortic regurgitation grade from baseline to follow-up is presented in Figure 1. Of the 26 patients with aortic regurgitation at baseline, two had a more severe grade, eight had a lower grade, and 16 an unchanged grade of aortic regurgitation at follow-up. Of the 26 patients without aortic regurgitation at baseline, two had developed a mild grade of aortic regurgitation at follow-up.

Table 1.

	Patients with aortic regurgitation at baseline (n=26)	Patients without aortic regurgitation at baseline (n=26)
ΔAortic root diameter,mm		
Overall	-1 (-3, 0.25)	-1 (-2, 1.25)
Men	-1 (-3, 2.25)	-1 (-3.5, 1.25)
Women	-0.5 (-3, 0)	0 (-1.75, 1.75)

Δ, change in aortic root diameter from baseline to follow-up. The data is presented in median (25th percentile, 75th percentile).

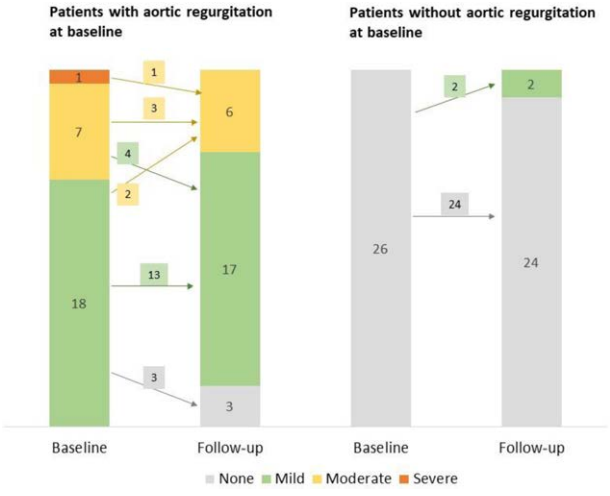

Figure 1.

Conclusion: Although aortic regurgitation like other AS related manifestations might vary over time, the majority of AS patients examined with echocardiography at baseline and after three to five years had an unchanged grade of aortic regurgitation at follow-up.

REFERENCE:

[1] Klingberg E, Svealv BG, Tang MS, Bech-Hanssen O, Forsblad-d'Elia H, Bergfeldt L. Aortic Regurgitation Is Common in Ankylosing Spondylitis: Time for Routine Echocardiography Evaluation? *The American journal of medicine*. 2015;128(11):1244-50 e1.

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