CLINICAL CHARACTERISTICS OF AXIAL SPONDYLOARTHRITIS PATIENTS FREQUENTING RHEUMATOLOGYUNIT CLINICSAT ALEXANDRIA MAIN UNIVERSITY HOSPITAL

Magdy Abdel-Aziz Zehairy, Eiman Abdelmonem Soliman, Ahmed Shaaban Ismail, Yasmine Mohamed Saad Abu Halawa
Internal Medicine Department, Faculty of Medicine, Alexandria University

INTRODUCTION

Axial spondyloarthritis (AxSpA) is an inflammatory condition of the axial skeleton, presenting diverse clinical manifestations and significant diagnostic challenges. Its global prevalence, influenced by genetic predispositions, environmental factors, and ethnic differences, is higher than previously estimated. The Human Leukocyte Antigen – B27 (HLA-B27) gene is crucial in disease susceptibility, emphasizing the interplay between genetics and environmental triggers. Axial SpA pathogenesis involves genetic susceptibility, gut microbiome dysbiosis, and mechanical stress, leading to immune dysregulation and chronic inflammation. Clinically, Axial SpA presents with chronic inflammatory back pain, enthesitis, peripheral arthritis, and extra-articular manifestations such as uveitis, psoriasis, and IBD. The ASAS classification criteria capture both radiographic and non-radiographic forms, emphasizing early detection via MRI. AxSpA significantly impacts health-related quality of life, with chronic pain and functional limitations reducing well-being. Assessment tools like the ASQoL guide holistic care.

AIM OF THE WORK

The aim of this study was to identify clinical characteristics, comorbidities, variations in disease activity and functional status, treatment use, and health related quality of life in AxSpA patients, investigate the relationship between clinical characteristics of AxSpA and HLA-B27, and disease activity and investigate the relationship between disease activity and health related quality of life.

PATIENTS AND METHODS

The study included 256 adult patients with AxSpA from May 2023 to May 2024. Patients met the ASAS Classification Criteria; those with biopsy-proven IBD or Psoriatic Arthritis were excluded. Data collection involved comprehensive patient interviews covering socio-economic data, symptoms, disease history, medications, comorbidities, extra-articular manifestations, and family history. Participants completed the ASQoL questionnaire, assessing disease impact on quality of life. Laboratory tests included CBC, ESR, CRP, Serum Creatinine, AST, ALT, and HLA-B27. Imaging studies, primarily MRI, assessed sacroiliac joint inflammation. Disease activity was measured using ASDAS-CRP, BASDAI, BASFI, and BASMI indices.

RESULTS

Table : Relation Between HLA-B27 And Different Clinical Characteristics

	HLA-B27				Test of Sig.	p
	Negative (n = 113)		Positive (n = 143)			
	No.	%	No.	%		
Patterns of joint involvement						
Axial	19	16.8	39	27.3	χ^2= 3.940*	0.047*
Axial + Peripheral	94	83.2	104	72.7		
Enthesitis						
No	36	31.9	67	46.9	χ^2= 5.902*	0.015*
Yes	77	68.1	76	53.1		
Dactylitis						
No	86	76.1	125	87.4	χ^2= 5.569*	0.018*
Yes	27	23.9	18	12.6		
Uveitis						
No	96	85.0	109	76.2	χ^2= 3.017	0.082
Yes	17	15.0	34	23.8		
ASDAS-CRP						
Mean ± SD.	4.54 ± 0.91		4.58 ± 0.91		U= 7803.000	0.638
Median (Min. – Max.)	4.46 (2.20 – 6.35)		4.65 (1.75 – 6.46)			
BASDAI						
Mean ± SD.	6.33 ± 1.65		5.95 ± 1.80		U= 6922.50*	.049*
Median (Min. – Max.)	6.55 (2.40 – 9.50)		6.10 (1.40 – 9.75)			
ASQoL						
Mean ± SD.	12.66 ± 4.18		10.18 ± 4.90		U= 5732.50*	<0.001*
Median (Min. – Max.)	14.0 (2.0 – 18.0)		11.0 (0.0 – 18.0)			

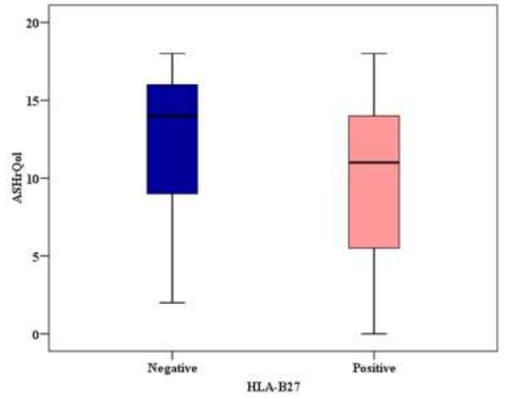

Figure: Relation between HLA-B27 and ASQoL

CONCLUSIONS

- Axial spondyloarthritis (AxSpA) demonstrates considerable variability influenced by demographic factors, disease manifestations, and genetic predispositions such as the HLA-B27 marker. This genetic factor is pivotal in understanding the disease's complexity and necessitates personalized diagnostic and management strategies. Our study revealed that HLA-B27 positive patients had a higher prevalence of axial joint involvement and uveitis, while those negative for HLA-B27 showed more peripheral joint involvement and enthesitis. Additionally, HLA-B27 negative patients reported elevated BASDAI and ASQoL scores, reflecting more severe disease activity and diminished quality of life. These findings emphasize the importance of tailoring treatment strategies according to HLA-B27, highlighting the value of personalized medicine in optimizing AxSpA management.