

## Orbital Doppler ultrasonography evaluation in patients with ankylosing spondylitis: A prospective study

**Mustafa Resorlu, Senay Bengin Ertem**

Department of Radiology, Canakkale Onsekiz Mart University  
Faculty of Medicine, Canakkale, Türkiye

To the Editor,

We read Sevinc et al.'s paper "Orbital Doppler ultrasonography evaluation in patients with ankylosing spondylitis: A prospective study" with great interest [1]. We regard that study as particularly important since it is the first article in which positive results in patients with ankylosing spondylitis (AS) have been published.

Ankylosing spondylitis is part of the 'seronegative spondyloarthropathies' group of diseases that involve the spinal joints. Various studies have reported ocular involvement at rates between 20% and 40%, the most frequent being uveitis. HLA-B27 gene is positive in approximately 50% of patients with uveitis. Complications such as cystic macular edema, glaucoma, and cataract have also been reported in cases with ocular involvement [2].

In their study of 42 patients (21 AS (+) and 21 controls), the authors reported that uveitis was present in eight patients and that these were all patients with AS. The article states that radiological evaluations and measurements were performed only from the left eye for purposes of standardization [1]. According to the study findings, uveitis has no effect on Doppler ultrasonography results. However, given the number of patients, we think that this conclusion is debatable. Various studies have shown that uveitis is frequently unilateral (87%) in patients with AS, the frequency rising with HLA-B27(+) [3]. We think that a useful comparison could be performed with these patients' other eyes because some exclusion criteria that might affect both the impact of uveitis and the general study results are not clearly set out in the

article. In particular, it is not made clear whether diabetes, hypertension, smoking, alcohol use, patients' lipid profiles, a previous history of cerebrovascular events, or the presence of peripheral artery disease were taken into account. In addition, severe carotid artery stenosis that might be present in the proximal region and affect the results could have been included in the radiological examination [4]. We think that these factors may have affected the results. We also think that combined evaluation of the Bath Ankylosing Spondylitis Disease Activity Index and the Doppler ultrasonography results might make an additional useful contribution to the study.

**Cite this article as:** Resorlu M, Ertem SB. Orbital Doppler ultrasonography evaluation in patients with ankylosing spondylitis: A prospective study. *North Clin Istanbul* 2025;12(3):385.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

**Use of AI for Writing Assistance:** Not declared.

## REFERENCES

- Sevinc OF, Alisan Alimoglu S, Turk SM, Gonullu E, Taydas O. Orbital Doppler ultrasonography evaluation in patients with ankylosing spondylitis: A prospective study. *North Clin Istanbul* 2024;11:208-13. [CrossRef]
- Van der Linden S, Valkenburg HA, Cats A. Evaluation of diagnostic criteria for ankylosing spondylitis. A proposal for modification of the New York criteria. *Arthritis Rheumatol* 1984;27:361-8. [CrossRef]
- Rademacher J, Poddubnyy D, Pleyer U. Uveitis in spondyloarthritis. *Ther Adv Musculoskeletal Dis* 2020;12:1759720X20951733. [CrossRef]
- Arthur A, Alexander A, Bal S, Sivadasan A, Aaron S. Ophthalmic masquerades of the atherosclerotic carotids. *Indian J Ophthalmol* 2014;62:472-6. [CrossRef]

**Received:** July 24, 2024 **Accepted:** August 04, 2024

**Online:** June 23, 2024

**Correspondence:** Senay Bengin ERTEM, MD.  
Canakkale Onsekiz Mart Universitesi Tip Fakultesi,  
Radyoloji Anabilim Dalı, Canakkale, Türkiye.

Tel: +90 286 263 59 50 – 1120 e-mail: benginertem@gmail.com

doi: 10.14744/nci.2024.30670

Istanbul Provincial Directorate of Health - Available online at [www.northclinist.com](http://www.northclinist.com)



## AUTHORS' REPLY

To the Editor,

We would like to express our gratitude to the authors for their constructive comments regarding our article [1]. Engaging with the perspectives of our colleagues is invaluable for enhancing scientific discourse and improving our research.





As noted in the authors' letters, our study was limited to the evaluation of the left eye using Doppler ultrasound techniques. Ankylosing spondylitis, a chronic inflammatory disease primarily affecting the spine and pelvis, can indeed impact both eyes, leading to conditions such as uveitis or iritis. Our specific focus on the left eye was informed by a previously conducted study that centered exclusively on left-eye assessments in a cohort of patients diagnosed with ankylosing spondylitis. This design choice was made to promote consistency and facilitate comparability of the results across studies [2].

We also recognize that the presence of comorbidities, such as diabetes, hyperlipidemia, and hypertension, which are known to elevate the risk of atherosclerosis, could significantly affect our study's outcomes. Furthermore, it is well-documented that high disease activity in ankylosing spondylitis, along with HLA-B27 positivity—a genetic marker associated with the condition—are critical factors influencing the likelihood of ocular complications. We agree with the authors that these important variables should be systematically evaluated.

In response to these considerations, we are currently initiating a new, more comprehensive study. This forthcoming research will include a broader set of data, taking into account the aforementioned comorbidities and their potential impact on ocular health. Additionally, we will conduct bilateral eye Doppler ultrasounds to allow for a more thorough clinical assessment of both eyes.

By implementing these refinements to our research design, we aim to provide clearer insights and answer the concerns raised regarding ocular involvement in ankylosing spondylitis.

In conclusion, we sincerely appreciate the authors for sharing their thoughtful insights, which are instrumental in guiding our efforts toward achieving more accurate and meaningful findings. We look forward to disseminating the results of our new study and contributing further to the scientific community.

 **Omer Faruk Sevinc**,<sup>1</sup>  **Sibel Alisan Alimoglu**,<sup>2</sup>  
 **Sumeyye Merve Turk**,<sup>3</sup>  **Emel Gonullu**,<sup>3</sup>  
 **Onur Taydas**<sup>1</sup>

<sup>1</sup>Department of Radiology, Sakarya University Faculty of Medicine, Sakarya, Türkiye

<sup>2</sup>Department of Ophthalmology, Sakarya University Faculty of Medicine, Sakarya, Türkiye

<sup>3</sup>Department of Rheumatology, Sakarya University Faculty of Medicine, Sakarya, Türkiye

Correspondence: Onur TAYDAS, MD.

Sakarya Universitesi Tip Fakultesi, Radyoloji Anabilim Dalı, Sakarya, Türkiye.

Tel: +90 264 888 40 00 e-mail: taydasonur@gmail.com

doi: 10.14744/nci.2025.70846



## REFERENCES

1. Sevinc OF, Alisan Alimoglu S, Turk SM, Gonullu E, Taydas O. Orbital Doppler ultrasonography evaluation in patients with ankylosing spondylitis: A prospective study. *North Clin Istanbul* 2024;11:208-13. [CrossRef]
2. Ozsahin M, Buyukkaya R, Besir FH, Onder HI, Erdogmus B, Ataoglu S, et al. Color Doppler imaging of the orbital vessels in ankylosing spondylitis. *Semin Ophthalmol* 2015;30:360-3. [CrossRef]