

EULAR  
03.06.22  
10.45AM CEST  
Kilchberg,  
Switzerland

## VALIDATION OF EULAR RECOMMENDATIONS FOR IMAGING IN GIANT CELL ARTERITIS

### Ultrasound offers potential as a tool for diagnosis and monitoring in GCA

**Giant cell arteritis (GCA) is a disease of the blood vessels, which causes inflammation in the artery lining. EULAR – the European Alliance of Associations for Rheumatology – has previously published recommendations for the use of imaging in large vessel vasculitis. Four new abstracts presented at the 2022 EULAR Congress in Copenhagen examined the use of ultrasound for the diagnosis and monitoring of GCA. Key findings establish that an imaging test supported by clinical pre-test probability is sufficient for the diagnosis of GCA; ultrasound is also confirmed as a potential tool for monitoring treatment response.**

Dr Elisa Fernández-Fernández presented a study looking at the validity of existing EULAR recommendations on the use of ultrasound in the diagnosis of GCA – specifically colour doppler ultrasound (CDUS). The results show that combining the results of a pre-test probability score with the CDUS allows for an accurate diagnosis of GCA, as established by the EULAR group, with less than 2% misclassification. Even a negative CDUS in patients with intermediate risk showed strong association with a negative diagnosis. This study validates the EULAR recommendations for the use of imaging in large vessel vasculitis, and establish that an imaging test supported by clinical pre-test probability is sufficient for the diagnosis of GCA.

Three other groups presented data at the congress on the evidence for ultrasound in GCA.

The ultrasonographic Halo score provides a quantitative measure of the extent of vascular inflammation in GCA. High Halo scores correlate with systemic markers of inflammation and may help diagnose GCA with high specificity. However, an increase in intima media thickness (IMT) in patients with elevated cardiovascular risk may lead to false positives. Dr Juan Molina Collada presented findings from a retrospective observational study in 157 patients referred to a fast-track ultrasound clinic.

There were no differences in cardiovascular risk between patients with and without GCA. Among patients without GCA, extra-cranial artery IMT and Halo scores were significantly higher in those with high or very high risk than in those with low or moderate risk. The group conclude that high cardiovascular risk may influence the diagnostic accuracy of the ultrasound Halo Score, leading to false-positive findings in these patients. This suggests that cardiovascular risk should be considered in the vascular assessment of patients with suspected GCA.

Follow-up assessment of Halo count and different quantitative scores based on intima media complex (IMC) measurement of Halos have demonstrated potential to show sensitivity to change. Including IMC of normalized arteries in such scores may reduce the risk of missing new arteritic lesions and assessment bias towards a response. Berit Dalsgaard Nielsen and colleagues aimed to evaluate ultrasound scores based on Halo features and scores based on IMT measurements of both visually normal and arteritic arteries in a prospective cohort of 47 new-onset patients.

All ultrasound outcomes improved during follow-up and were apparent by week 8. However, only scores including temporal arteries consistently showed statistically significant change from baseline, and a significant correlation with markers of disease activity. Some scores based on large vessels showed a weak correlation with C-reactive protein, but otherwise did not correlate with clinical disease activity. These findings confirm ultrasound as a potential tool for monitoring treatment response in people with GCA.

Polymyalgia rheumatica (PMR) and GCA are closely related, with PMR occurring in approximately 50% of patients with GCA. Research presented by Dr Eugenio de Miguel aimed to determine the prevalence of subclinical GCA in 258 people with newly diagnosed PMR, using vascular ultrasound as a diagnostic tool.

The results showed that one-fifth of PMR patients without symptoms or signs of GCA have ultrasound findings consistent with the diagnosis of GCA. Overall, 24.3% had only temporal artery involvement (cranial GCA), 65.8% had an extra-cranial artery involvement, and 9.8% had a mixed form.

#### **Source**

Dalsgaard Nielsen B, et al. Sensitivity to change of different ultrasound scores in a prospective follow-up of new-onset treatment-naïve GCA patients. Presented at EULAR 2022; abstract OP0186.

de Miguel E, et al. Prevalence of subclinical giant cell arteritis in patients with polymyalgia rheumatica. Presented at EULAR 2022; abstract OP0184.

Fernández-Fernández E, et al. Validity of the EULAR recommendations on the use of ultrasound in the diagnosis of giant cell arteritis. Presented at EULAR 2022; abstract OP0183.

Molina Collada J, et al. Impact of Cardiovascular Risk on the diagnostic accuracy of the Ultrasound Halo Score for Giant Cell Arteritis. Presented at EULAR 2022; abstract OP0288.

#### **About EULAR**

EULAR – the European Alliance of Associations for Rheumatology – is the European umbrella organisation representing scientific societies, health professional associations and organisations for people with rheumatic and musculoskeletal diseases (RMDs). EULAR aims to reduce the burden of RMDs on individuals and society and to improve the treatment, prevention and rehabilitation of RMDs. To this end, EULAR fosters excellence in education and research in the field of rheumatology. It promotes the translation of research advances into daily care and fights for the recognition of the needs of people with RMDs by the EU institutions through advocacy action.

#### **About the EULAR European Congress of Rheumatology**

Since its introduction in 2000, the annual EULAR European Congress of Rheumatology has become the primary platform for exchange of scientific and clinical information in Europe. It is also a renowned forum for interaction between medical doctors, scientists, people with arthritis/rheumatism, health professionals and representatives of the pharmaceutical industry worldwide. The EULAR congress is usually held in June in one of the major cities in Europe.

The scientific programme covers a wide range of topics on clinical innovations, clinical, translational and basic science. Meetings set up by associations of people with arthritis/rheumatism, health professionals and the health care industry complement the programme. The poster sessions, offering lively interaction between presenters and participants, are regarded by many as the heart of the congress.

Over the years, the EULAR Congress has gained a reputation of being a most innovative platform for the practicing physician particularly with respect to the acquisition of information on novel clinical research. The congress attracts more than 18,000 delegates from more than 130 countries.

The aim of the EULAR European Congress of Rheumatology is to provide a forum of the highest standard for scientific, both clinical and basic, educational, and social exchange between professionals involved in rheumatology, liaising with patient organisations, in order to achieve progress in the clinical care of people with rheumatic diseases.

**Contact**

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