

Prognostic Value of Quantifying Vascular Inflammation through Ultrasound in Patients with Giant Cell Arteritis: Interim Analysis of the MAGiCUS Study

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Objective

- To determine the prognostic value of quantifying vascular inflammation through ultrasound for predicting future relapses in GCA patients.

Methods

- International multicenter prospective observational study
- Patients referred to GCA fast-track clinics within the PMR and GCA EULAR study group.
- Inclusion criteria: confirmed GCA diagnosis by clinicians at least after 6 months of follow-up.
- Vascular ultrasound of temporal and axillary arteries was performed at baseline, 1, 3, 6, and 12 months.
- Vascular inflammation was quantified using the OMERACT GCA Ultrasonographic Score (OGUS). OGUS normalization was defined as OGUS< 1
- The primary outcome was the occurrence of relapse between the 6 and 12 months follow-up period.
- Baseline OGUS, OGUS normalization and changes in OGUS during the first 3 months were compared between patients with and without relapse during follow-up.

Parameter	All patients n = 142	Relapse from 6 to 12 months follow-up n = 28	No relapse from 6 to 12 months follow-up n = 114	p
Baseline OGUS, mean (SD)	1.27 (0.49)	1.64 (0.60)	1.17 (0.41)	<0.001
1-month OGUS, mean (SD)	1.08 (0.34)	1.37 (0.42)	1.02 (0.28)	<0.001
3-months OGUS, mean (SD)	0.96 (0.28)	1.12 (0.33)	0.92 (0.25)	0.006
0-1-month OGUS change, mean (SD)	0.2 (0.26)	0.33 (0.30)	0.17 (0.24)	0.004
0-3-months OGUS change, mean (SD)	0.32 (0.4)	0.55 (0.56)	0.27 (0.33)	0.001
OGUS normalization at 1 month (n=141), n (%)	49 (34.5)	6 (21.4)	43 (38.1)	0.073
OGUS normalization at 3 months (n=130), n (%)	80 (56.3)	5 (20.8)	61 (57.5)	0.001

Table 1. Baseline ultrasound variables, at 1 month and 3 months, as well as changes in OGUS and OGUS normalization at 1 and 3 months in patients with and without relapse during follow-up.

Results

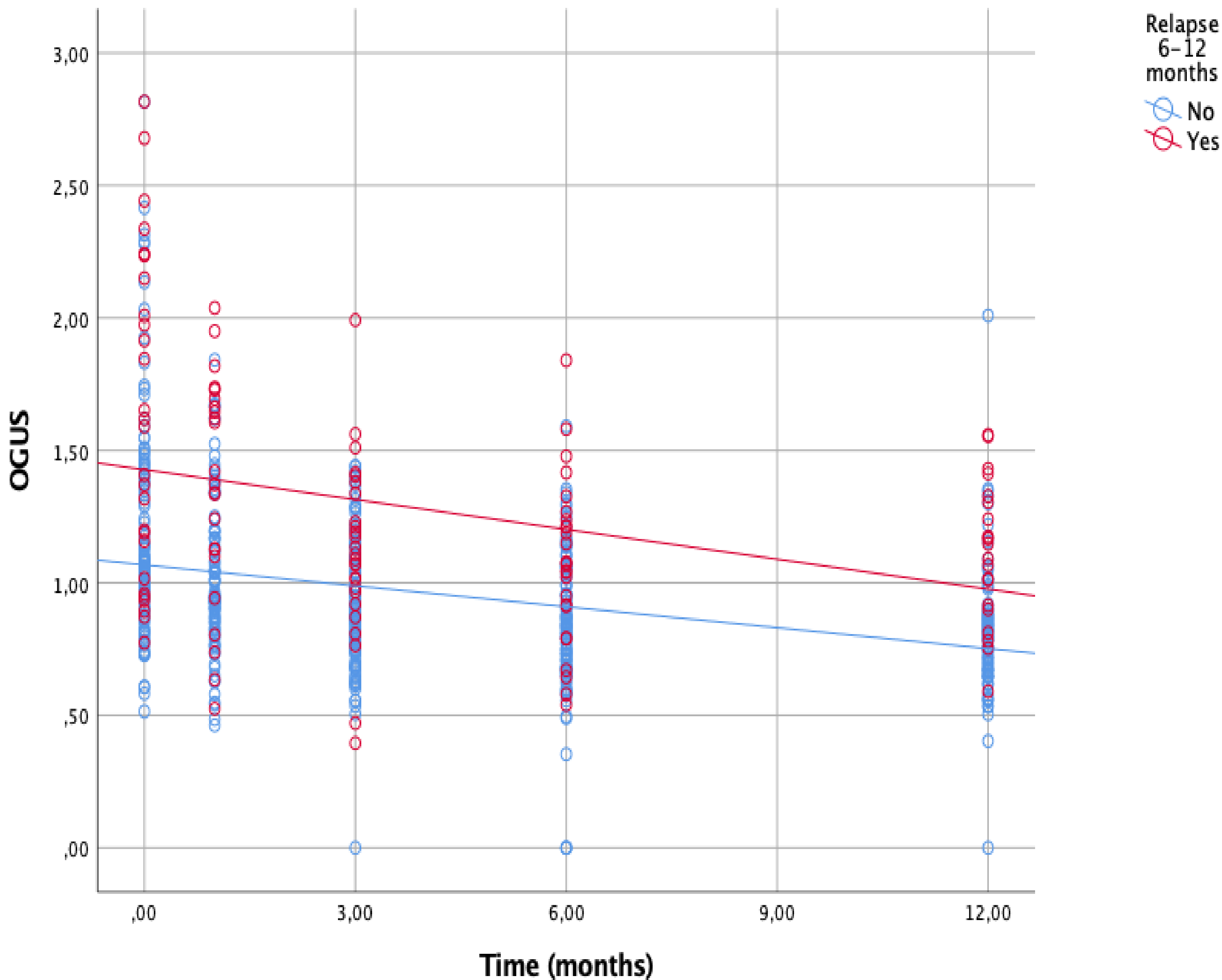


Figure 1. Change in OGUS during follow-up in patients with and without relapse from 6 to 12 months.

Conclusions

- Quantifying vascular inflammation through ultrasound has a prognostic value for predicting relapses during follow-up of GCA patients.
- Increased vascular inflammation at diagnosis, as well as the absence of normalization of vascular inflammation during the first three months of treatment, are associated with a higher risk of future relapse