has a well-established role in cranial GCA and LV-GCA diagnosis, respectively. However, it is unknown whether specific clinical and laboratory parameters are linked with US findings suggestive of vascular inflammation ("halo" sign).

Objectives: The aim of this study was to examine possible association between clinical and laboratory characteristics of the patients and detection of vessel wall inflammation in the US.

Methods: Patients ≥ 50 years old with elevated ESR (≥ 50 mm/h) and/or CRP (≥ 10 mg/L) that presented in our outpatient rheumatology clinics from July 2017 to December 2019 with possible clinical diagnosis of GCA were included. Three groups were compared: Patients with "cranial symptoms" (with or without PMR), patients with PMR symptoms only and patients with increased inflammation markers without specific symptoms indicative of GCA. Temporal arteries and their main branches, as well as facial and axillary arteries were evaluated by US bilaterally for the presence of non-compressible "halo sign" at the vessel wall. Clinical symptomatology and the occurrence of anemia and thrombocytosis were recorded.

Results: 52 patients were included. 71.2% were females, with a mean $\pm$ SD age of 71.0 ± 10.0 years. 17 patients had "cranial symptoms" (seven patients with concomitant PMR and ten without), 17 patients had PMR symptoms only, while 18 patients had non-specific symptoms (e.g. fever) (Table 1). Among 17 patients with "cranial symptoms", 7/7 (100%) with concomitant PMR had a positive temporal US, while only 3 out of 10 (30%) without PMR had a positive temporal US ($p<0.01$) and US was indeterminate in 2 of them (20%). Collectively, 10/17 (58.8%) of patients with "cranial symptoms" and systemic inflammation had a US examination compatible with GCA. No patient with "cranial symptoms" had a positive US of axillary arteries. No patient with only PMR symptoms, had "halo sign" in temporal and facial arteries, while 3 out of 17 (17.6%) had a positive axillary US. From the 18 patients with elevated ESR/CRP, one had a positive temporal US and another one had a positive axillary US. Regarding specific symptoms, positive temporal US was associated with new headache ($p=0.003$), vision impairment ($p=0.001$), jaw claudication ($p=0.05$), scalp tenderness ($p=0.01$) and fever ($P=0.002$), but not with PMR ($p=0.317$). Thrombocytosis was associated with an increased risk for "halo sign" detection in temporal ($p=0.04$) and facial ($p=0.007$) arteries, but not in axillary arteries ($p=0.52$).

Table 1. Symptomatology and ultrasound findings in the patients examined. PMR: Polymyalgia Rheumatica

Ultrasound	Symptoms			
	Cranial (n=17)		PMR only (n=17)	Non-specific symptoms (n=18)
	PMR (+) (n=7)	PMR (-) (n=10)		
Temporal (+)	7	3	0	1
Facial (+)	2	1	0	0
Axillary (+)	0	0	3	1

Conclusion: 60% of patients with "cranial symptoms" and elevated inflammation markers have US temporal findings indicative of GCA. This is more pronounced in patients with concomitant PMR symptoms and is associated with specific symptomatology. 18% of patients with only PMR symptoms might have LV-GCA, while those with high ESR/CRP without GCA-related symptoms rarely have "halo sign" in US.

Disclosure of Interests: None declared

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AB0474 CAROTID CONTRAST ENHANCED ULTRASOUND IN CASES OF TAKAYASU ARTERITIS COMPLICATED WITH BEHCET'S DISEASE

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Background: Carotid contrast enhanced ultrasound (CEUS) is used for diagnosis and activity determination of patients with Takayasu's arteritis (TA). However, very little is known about the carotid CEUS features of TA complicated with Behcet's disease (BD).

Objectives: This study reports the carotid CEUS features in cases of TA complicated with BD (TBD).

Methods: A total of 10 carotid CEUS examinations were performed on 4 patients of TBD. 10 TA patients complicated with no rheumatoid disease were included as control group. For each carotid artery lesion, the carotid CEUS features was graded as follows: Grade 0, artery wall shows no microbubbles, Grade 1, artery wall shows limited or moderate microbubbles, Grade 2, artery wall shows severe microbubbles.

Results: 2/10 patients in TBD group has oral ulcer during the CEUS examination, while all the other patients included in our study showed no clinical symptoms related to active TA or BD. The carotid wall thickness was greater of CEUS grade 2 than grade 1 in both group (TBD: 2.62 ± 0.74 mm vs 1.66 ± 0.22 mm, $p=0.001$; TA: 1.84 ± 0.31 mm vs 1.53 ± 0.5 mm, $p=0.136$). The carotid wall thickness

was significantly greater in TBD group than TA group, but there was no significant differences between the two groups in clinical data and CEUS grade (table 1).

Table 1. Clinical data and carotid CEUS features of both groups

	TBD	TA	p
Age (year)	32.5 $\pm$ 3.44	30.5 $\pm$ 9.2	0.487
Male	3	2	0.605
ESR (mm/h)	4(2, 10)	7(3.5, 11)	0.406
CRP (mg/L)	6.42(0.55, 15.38)	0.58(0.44, 5.05)	0.168
Wall thickness (mm)	2.10 $\pm$ 0.70	1.67 $\pm$ 0.44	0.030
CEUS grade 2	9	12	0.527

Conclusion: This study first shows carotid CEUS features in cases of TA complicated with BD, which may help with the comprehensive treatments of the disease.

Disclosure of Interests: None declared

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AB0475 CLINICAL RELEVANCE OF CLINICOPATHOLOGICAL PHENOTYPE AND ANTIBODY SPECIFICITY IN ANCA-ASSOCIATED VASCULITIS

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Background: Classification of ANCA-associated vasculitis (AAV) has emerged in order to identify more homogenous subgroups of patients with granulomatosis with polyangiitis (GPA) or microscopic polyangiitis (MPA). However, the exact value of classifying patients according to antibody specificity (proteinase 3 [PR3] or myeloperoxidase [MPO]) is still unclear.

Objectives: To assess demographic, clinical and prognostic differences among subgroups of AAV patients, according to clinicopathological classification (GPA vs. MPA) and antibody specificity (PR3 vs. MPO) in a single-centre cohort.

Methods: A clinical retrospective (1990-2019) observational analysis was performed. Among all patients with ANCA positivity, we analysed patients with GPA and MPA diagnosed according to 2018 Draft Classification Criteria for AAV¹, who were homogeneously treated and followed by the authors. Demographic, clinical and laboratory data, as well as disease outcomes, particularly BVAS, disease relapses and survival, were reviewed.

Results: Among a total 140 patients with any form of AAV, 32 were excluded for a diagnosis of isolated interstitial lung disease (n=10), cocaine-induced AAV (n=3), ANCA negative or undetermined disease (n=16), atypical ANCA or double PR3/MPO positivity (n=3). Finally, 108 patients with MPA (n=66) or GPA (n=42) were included (83 MPO, 25 PR3). GPA was associated with PR3 in 55% and MPO 45% of patients. MPA was associated with MPO in 97% and PR3 in 3% of patients. GPA patients with PR3 or MPO presented with similar clinical features, disease extent and BVAS. However, compared with GPA/PR3, GPA/MPO were more frequently women ($p=0.002$). MPA patients presented more frequent with renal involvement ($p=0.008$) and GPA patients with ENT/ocular involvement ($p<0.001$). Patients with MPO were older ($p=0.028$) and more frequently women ($p=0.001$) than PR3

Log-rank $p=0.008$

patients. When antibody specificity was compared, differences on organ-specific manifestations were less clear than between clinical phenotypes (GPA vs. MPA), and were only seen in ENT/ocular involvement (more frequent in PR3 than in MPO patients) and in muscle biopsies disclosing vasculitis (more frequent in MPO than in PR3 patients). GPA and PR3 patients presented more frequent relapsing disease than MPA and MPO patients, respectively (GPA 60% vs. MPA 36%; $p=0.018$ / PR3 60% vs. MPO 41%; $p=0.094$). While GPA tended to have a better survival rate than MPA patients ($p=0.066$) (Graph1), the MPO-associated disease (GPA or MPA) had clearly worse survival prognosis than PR3-AAV ($p=0.008$) (Graph2), similarly to what occurred in GPA-MPO (compared with GPA-PR3).

Conclusion: A high proportion of GPA patients with MPO-ANCA (45%) is observed in our series. GPA is associated with a more frequent relapsing disease than MPA. MPA and presence of MPO were more frequent in females and older patients. Clinical features were similar in GPA patients with PR3 or MPO. The presence of MPO (in GPA or MPA) seems to be the main factor associated with mortality in AAV.

References:

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AB0476

GIANT CELL ARTERITIS: A DISEASE WITH DIFFERENT SUBSETS

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Background: Giant cell arteritis (GCA) is the most common form of autoimmune vasculitis in the elderly. Some evidence indicates that GCA is a heterogeneous disease in terms of symptoms, immune pathology and response to treatment¹.

Objectives: To analyze whether the identification by image of cranial vessels (VC) or large vessels (VG) involvement allows to characterize different clinical subsets of the disease.

Methods: Descriptive observational study of the last 87 consecutive patients with a new diagnosis of GCA in our hospital. All patients had a CV and LV CDUS exam that included axillary, subclavian, vertebral and carotid arteries or a Positron Emission Tomography (PET-CT). The OMERACT (Outcome Measures in Rheumatology) definitions of halo sign were used for ultrasound diagnosis and IMT limits were established as ≥ 0.34 mm for superficial temporal arteries and ≥ 1 mm for axillary, subclavian and carotid arteries; a clear halo sign was used in the vertebral

arteries. The radiologist's report and the liver/vascular wall index were used for the definition of positive PET-CT. The medical records of these patients were reviewed and their demographic, clinical and laboratory data were compared between the different patterns of GCA. The statistical significance limit was set at $P < 0.05$. Statistical analyses were performed by using SPSS version 25.

Results: Out of 198 patients with suspected GCA who underwent a CDUS or PET-CT between November 2016 and November 2019, 87 were diagnosed of GCA. Three different patterns were detected: 44 patients (50.6%) had an exclusive cranial pattern, 31 (35.6%) had a mixed pattern with involvement of both CV and LV and 12 (13.8%) had an exclusive large vessel pattern. The differences between these 3 subsets are shown in table 1. Patients with a LV pattern had more fever and polymyalgia rheumatica than patients with CV involvement and fewer ischemic visual disturbances than those with mixed pattern, reaching statistical significance. In addition, they tended to have fewer other ischemic symptoms (headache, jaw claudication) and more general symptoms than patterns with CV involvement. Regarding laboratory values, the erythrocyte sedimentation rate was significantly higher in the exclusive CV involvement group and lower in those with only LV involvement.

Table 1. Characteristics of the patients with the different patterns

	Cranial pattern (n = 44; 50.6%)	Mixed pattern (n = 31; 35.6%)	Large vessel pattern (n = 12; 13.8%)	p-value
Age, years (mean, SD)	78 $\pm$ 7	76 $\pm$ 7	74 $\pm$ 11	0.291
Male sex	12 (27.3%)	14 (45.2%)	5 (41.6%)	0.252
ESR, mm/h (mean, SD)	78.7 $\pm$ 33.7	63.9 $\pm$ 33.0	52.1 $\pm$ 33.5	0.031*
CRP, mg/L (mean, SD)	55.8 $\pm$ 46.6	68.3 $\pm$ 63.6	85.9 $\pm$ 89.3	0.801
Headache	36 (81.8%)	25 (80.6%)	8 (66.6%)	0.704
Jaw claudication	12 (27.3%)	5 (16.1%)	1 (8.3%)	0.249
Ischemic visual disturbances	9 (20.4%)	11 (35.5%)	0 (0%)	0.041*
PMR	18 (40.9%)	13 (41.9%)	8 (66.6%)	0.018*
General symptoms	17 (38.6%)	13 (41.9%)	8 (66.6%)	0.132
Fever	5 (11.4%)	3 (9.7%)	6 (50%)	0.005**

SD: standard deviation. ESR: erythrocyte sedimentation rate. CRP: C reactive protein. PMR: polymyalgia rheumatica.

*Statistically significant difference between cranial pattern and large vessel pattern.

**Statistically significant difference between mixed pattern and large vessel pattern.

Conclusion: Imaging in GCA allow us to establish different patterns of involvement (cranial, mixed, large vessel) that correspond to different clinical subsets. The patients with LV subset debut with a lower ESR and have more fever and polymyalgia rheumatica and less ischemic symptoms.

References:

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AB0477

OVARIAN RESERVE IN PATIENTS WITH RHEUMATIC DISEASES

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Background: Access to assays of circulating anti-Müllerian hormone (AMH) levels has opened a new page in the assessment of ovarian function and fertility in various diseases, including rheumatic diseases (RDs). The definition of AMH as a marker of ovarian reserve significantly simplified its interpretation as well as measuring the contribution of the disease itself to the patients' infertility.