Does the age at diagnosis influence the clinical presentation and outcome of ANCA associated vasculitis? Analysis from the DCVAS study.

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Background. ANCA-associated vasculitis (AAV) can affect all age groups. AAV is increasingly recognized in older patients (1), with reported higher frequency of renal involvement and worse outcome (2). Nevertheless, the differences in disease presentation and outcome between younger and elderly-onset patients remain controversial (2).

Objectives. To identify distinguishing characteristics of clinical presentation and short-term outcome and damage amongst older-onset (≥ 65) as compared to younger-onset (<65) age at diagnosis in patients with AAV.

Methods. We included patients with a final 6-months diagnosis of AAV (GPA, MPA, EGPA) enrolled in The Diagnostic and Classification Criteria for Primary Systemic Vasculitis (DCVAS) study up to May 2017. We divided the population according to age at diagnosis: < 65 years old (group A) or ≥ 65 (group B).

Results. We included 1338 patients with AAV. 66% had a disease onset < 65 years of age (male:50%; mean age 48.4±12.6 years); 34% had an elderly-onset (male: 46%; mean age 73.6±6). The diagnoses of GPA and EGPA were significantly more frequent in group A (73% and 74% of patients, respectively) compared to MPA patients experiencing an elderly-onset in 56% of cases; p<0.001 for comparisons within each diagnostic group. P-ANCA (MPO) positivity was more frequent in group B (48% vs 27%, p=0.001), while c-ANCA (PR3) positivity predominated in group A (48% vs 35%; p<0.001). Significantly more patients from group B had comorbidities (85% vs 59%; p<0.001). The clinical presentation at disease onset significantly differed between the two groups. Patients from group A had higher rates of ocular, cutaneous and musculoskeletal involvement compared to patients included in group B who experienced more systemic symptoms, renal involvement, cardiovascular and neurological manifestations (figure 1). Pulmonary and gastrointestinal manifestations were equally distributed between the two age groups.

Damage accrual measured with the Vasculitis Damage Index (VDI) was significantly higher in patients from group B, with 12% of patients with a VDI score ≥ 5 at 6-months from diagnosis,

compared to 7% of patients in the younger-onset group; p= 0.01. There were 13 (1.5%) deaths amongst patients belonging to group A compared to 22 (4.8%) in group B, HR 3.44 (1.65-7.18); p=0.001.

Conclusions. Patients with AAV with an elderly-onset disease display a different pattern of organ-involvement and an increased risk of significant damage and mortality compared to younger patients. A better understanding of the influence of age of onset on the clinical course of AAV could improve diagnostic and classification criteria and has implications on their pattern of presentation and subsequent clinical course.

References

1) Watts RA, et al. Epidemiology of systemic vasculitis. Arthritis Rheum 2000;43:414–19
2) Chen M, et al. Antineutrophil cytoplasmic autoantibody-associated vasculitis in older patients. Medicine 2008;87:203-9.

Table 1. Clinical characteristics and outcome according to age groups.

	Group A (< 65 yrs) n=878	**Group B (≥ 65 yrs)** N=460	**p**
Mean Age	48.4±12.6	73.6±6	<0.0001
Diagnostic delay	14.6±34.4	11.8±32.2	0.03
Symptoms duration	19.9±35.1	18.1±33.1	0.14
Type of AAV:			
GPA	536 (73%)	199 (27%)	<0.001
EGPA	148 (74%)	186 (26%)	<0.001
MPA	189 (44%)	66 (56%)	<0.001
p-ANCA (MPO)	240 (27%)	222 (48%)	0.001
c-ANCA (PR3)	421 (48%)	161 (35%)	<0.001
VDI at 6-months follow-up			
=0	236 (28%)	90 (22%)	base
=1/2	378 (44%)	184 (41%)	0.19
=3/4	187 (22%)	116 (26%)	0.01
=≥5	57 (7%)	55 (12%)	0.001
Mortality	13 (1.5%)	22 (4.8%)	0.001

AAV: ANCA associated vasculitis, yrs: years, EGPA: eosinophilic granulomatosis with polyangiitis, GPA: granulomatosis with polyangiitis, MPA: micropolyangiitis, VDI: Vasculitis Damage Index.

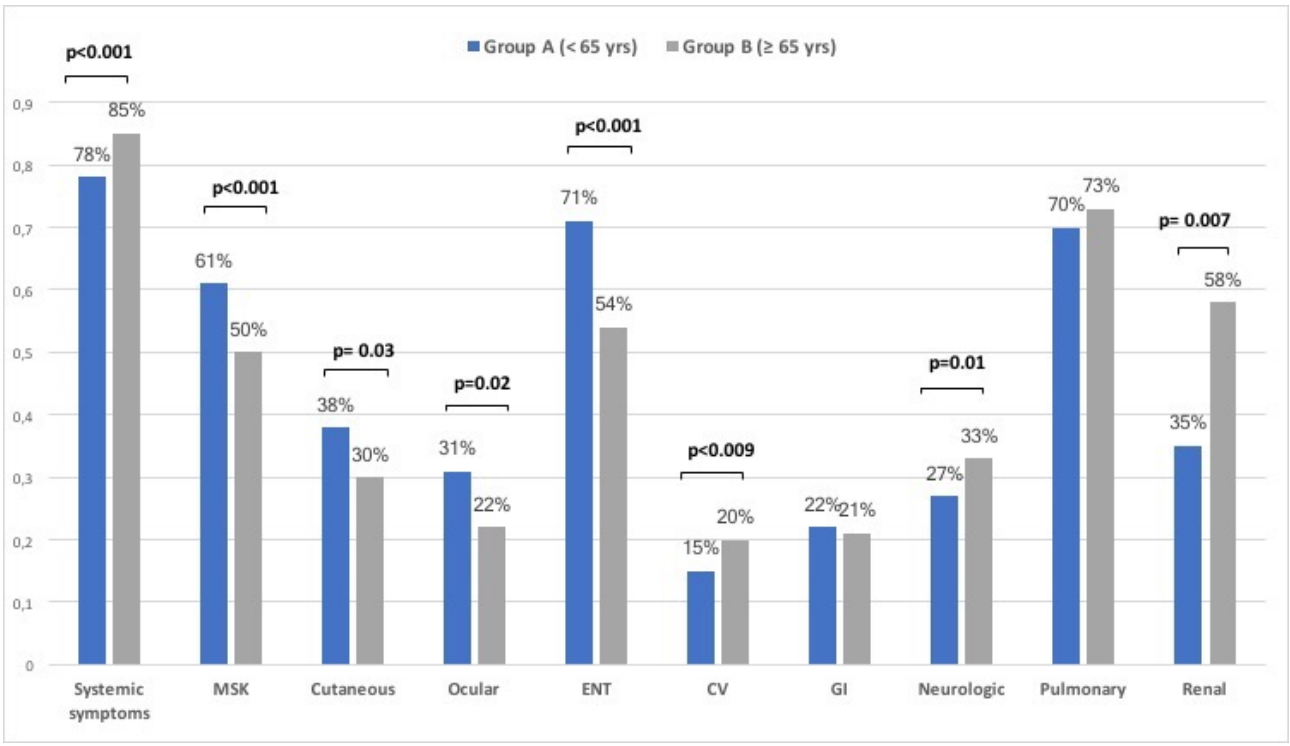

Figure 1. Clinical manifestations at disease onset. Comparison between group A (disease onset < 65 years old) and group B (onset ≥ 65 years old). MSK: musculoskeletal symptoms, ENT: ear-nose-throat manifestations, CV: cardiovascular, GI: gastrointestinal.