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FRI0309 CARDIOVASCULAR EVENTS IN ANCA-ASSOCIATED VASCULITIS: A META-ANALYSIS OF OBSERVATIONAL STUDIES

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Background: Several chronic inflammatory diseases are associated with cardiovascular disease, but the cardiovascular risk in ANCA-associated vasculitis is poorly quantified.
Objectives: The aim of the present study is to review the evidence for the increased cardiovascular risk in patients with ANCA-associated vasculitis.
Methods: A comprehensive systematic review was conducted in accordance with guidelines of preferred reporting items for systematic reviews and meta-analyses (PRISMA). The databases PubMed, Embase.com and the Cochrane Library (Wiley) were searched for original observational studies reporting an estimate of the association between ANCA-associated vasculitis and cardiovascular events, including ischemic heart disease, cerebrovascular accidents and/or peripheral arterial disease. The quality of the included studies was assessed with the Newcastle–Ottawa Scale. Summary estimates were derived with a random-effects model and reported as relative risks.
Results: 1375 studies were identified and 7 studies were included comprising 14098 ANCA-associated vasculitis patients versus general population controls in 6 studies and chronic kidney disease patients in 1 study. ANCA-associated vasculitis carried a relative risk of 1.65 (95% confidence interval, 1.23–2.22) for all cardiovascular events, 1.60 (1.39–1.84) for ischemic heart disease and 1.20 (0.98–1.48) for cerebrovascular accidents. We did not find studies that addressed the risk for peripheral arterial disease separately. No heterogeneity was seen in the estimates.
Conclusions: This meta-analysis of observational studies supports an increase in cardiovascular risk of about 65% in patients with ANCA-associated vasculitis, similar to that found in other chronic inflammatory diseases. Hence, there is a clear need for active cardiovascular risk management in patients with ANCA-associated vasculitis.
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FRI0310 LONG-TERM MORTALITY AND COMPLICATIONS IN YOUNG AND ELDERLY PATIENTS WITH ANCA-ASSOCIATED VASCULITIS

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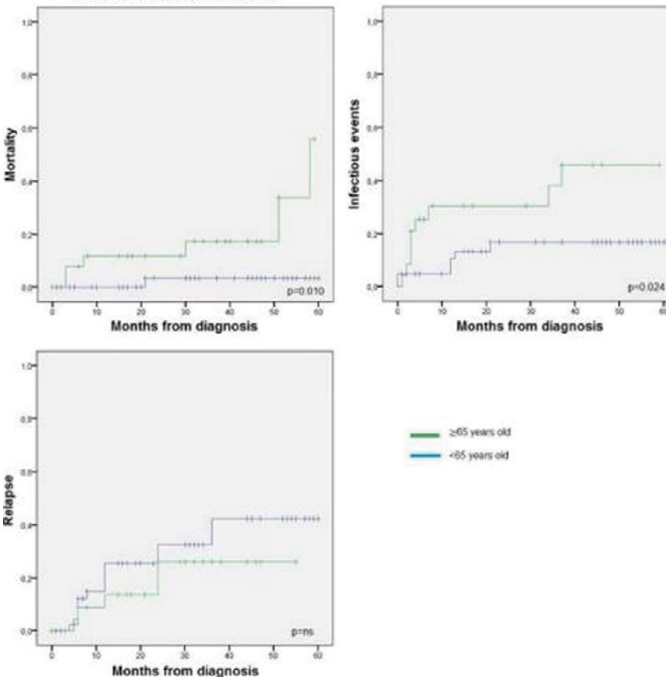
Background: Advancing age is a risk factor for complications and mortality in anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV).[1,2]
Objectives: To analyze differences in infectious, metabolic and cardiovascular complications, renal function, and mortality in patients diagnosed with AAV before or after 65 years of age, and followed for up to 5 years.
Methods: We retrospectively collected long-term clinical and laboratory data of AAV patients of two referral centers in Northern Italy from 2000, and grouped patients in young (YP, <65 years old) and elderly (EP, ≥65 years old).
Results: Of the 114 patients included, 83 had a follow-up of at least 2 years (58 YP vs 25 EP). Median follow-up was 55 [32–100] months in YP and 44 [18–59] months in EP ($p<0.013$). 86.1% (68 patients) and 62.9% (22 patients) were diagnosed with GPA in YP and EP subsets, respectively. At baseline, YP and EP patients were similar in terms of BVAS/WG score, glomerulonephritis and alveolar hemorrhage, whereas creatinine levels (1.1 mg/dL [0.8–2.3] vs 1.82 mg/dL [0.98–3.5], p=0.044), renal insufficiency rate (44.7% vs 67.6%, p=0.026) and ANCA pattern (PR3 67.5% vs 26.5%, MPO 19.5% vs 59.8%; $p<0.001$ for both comparisons) were different in YR and ER, respectively. No significant difference in induction and maintenance regimens was found in the two groups, nor in clinical remission rate after induction treatment (all $p>0.05$).
At 2 year, creatinine levels (YP 1.0 mg/dL [0.85–1.31], EP 1.2 mg/dL [1.1–2.2]) and renal insufficiency rate decreased within each group ($p<0.05$). End-stage renal disease, hypertension rate, cardiac or cerebral ischemic attack rate, diabetes, solid or hematological cancer rate and mean vasculitis damage index were not statistically different in the two groups, whereas heart failure was more represented in EP (0.0% vs 8.3%, p=0.027).
Within the first 5 years of follow-up, severe infection (requiring hospitalization) and mortality rates were significantly higher in EP group when compared with YP group (p=0.024 and p=0.010 by Kaplan-Meier analysis, respectively, Figure 1), mirrored by a higher annual severe infection rate (p=0.041; 0.22±0.69 versus 0.05±0.17) and annual mortality rate (p=0.001; 0.33±1.02 versus 0.01±0.08) in EP group. Relapse rate was similar in YP and EP within 5 years (Figure 1). Lymphopenia rate (at least 1 event, $<1000x10^9$/L) was significantly higher in EP only at 6 month ($p<0.05$), whereas severe lymphopenia ($<500x10^9$/L), leukopenia

Figure 1. Kaplan-Meier curves of mortality, infectious events and relapse within 5 years of follow-up in our cohort of patients with AAV.



($<4000x10^9$/L) or hypogammaglobinemia (Ig<5g/L) rates were similar in both groups during the follow-up. Persistent lymphopenia (≥12months, $<1000x10^9$/L) was detected in 3 patients after cyclophosphamide treatment (2 YP and 1 EP). Only relapse before 2 years of follow-up was associated with infections in YP ($p<0.001$, OR 4.0 [CI 95%, 1.2–13.3]), but not in EP.
Conclusions: Heart failure is more frequent in older patients, which have higher infection and mortality rates. Transient lymphopenia is significantly higher in EP after induction treatment, but is not associated with their increase in infectious events. Despite a similar incidence of relapse in YP and EP, relapsing disease associates with infectious events in YP, but not in EP.
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FRI0311 ENDOVASCULAR INTERVENTION VERSUS SURGERY IN PATIENTS WITH TAKAYASU ARTERITIS: A META-ANALYSIS

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Background: Although medical treatment has advanced, surgical treatment is needed to control the progression and symptoms of Takayau arteritis (TA). Endovascular intervention or surgical revascularization is performed; however, there are few comparative studies of these methods.
Objectives: There are many studies about surgery and endovascular intervention; however, it is still unclear which treatment has better a benefit/risk ratio. Because neither meta-analysis nor large-scale studies are available for surgical treatment of TA, we conducted a meta-analysis to examine the outcome of surgical treatment.
Methods: A meta-analysis comparing endovascular intervention and surgery outcomes was performed using the MEDLINE and Embase databases.
Results: A total of 14 studies of 598 patients and 1,049 lesions were included. Endovascular intervention was performed in 418 lesions and surgery in 631 lesions. Restenosis was more common in endovascular intervention than in surgery (odds ratio [OR] =2.74, 95% confidence interval [CI] =1.75–4.27, $p<0.00001$). Other complications, including stroke, did not differ between endovascular intervention and surgery (OR =0.75, 95% CI =0.49–1.15, $p=0.19$). There was no difference in mortality between the two groups (OR =1.11, 95% CI =0.50–2.46, $p=0.81$).

Table 1. Outcomes of endovascular intervetion compared to sugery in patients with Takayasu artheritis

	Test of association			Test of heterogeneity		
	OR	95% CI	P-value	Model	P-value	I^2(%)
Restenosis	2.74	1.75–4.27	<0.00001	R	0.05	41
Other complications	0.75	0.49–1.15	0.19	F	0.27	18
Stroke	0.5	0.17–1.50	0.22	F	0.98	0
Death	1.11	0.50–2.46	0.81	F	0.67	0

Conclusions: This meta-analysis showed the superiority of surgical revascularization over endovascular intervention.

Figure 1. ORs and 95% CIs of individual studies and pooled data; comparison of endovascular intervention and surgical revascularization for restenosis.

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FRI0312 THE FREQUENCY AND SEVERITY OF PATIENT-REPORTED SYMPTOMS IN GIANT CELL ARTERITIS

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Background: A better understanding of the patients' perspectives is pivotal in the development of patient-reported outcomes (PROs) in vasculitis.
Objectives: To assessed patients' perspective of disease amongst cases with Giant Cell Arteritis (GCA) compared to comparator illnesses mimicking large vessel vasculitis (LVV) included in the Diagnostic and Classification Criteria in Vasculitis Study (DCVAS) database.
Methods: Patient Description of Illness (PDI) forms were circulated amongst Centres participating in the DCVAS study. The PDI form records up to 10 free-text severity ranked symptoms in descending order of severity, a body-map to localise the sites of pain and a free-text short summary of illness description. Free text was reorganized through content and thematic analysis.
Results: PDI forms from 89 patients with GCA and 28 comparators (COM) were analysed. There was no difference in age and sex distribution between groups (mean age 70±8 for GCA and 69±12 for COM). The symptoms description and frequency of the first most severe aspect of disease, including the patient's own words, is presented in Table 1. The symptom regarded as the most severe by both groups was headache. While there were no differences in the frequency of sudden visual loss, visual symptoms were reported more commonly as the most severe feature by COM vs GCA (21% vs 8%, p=0.05). Arthralgia was more frequently reported by COM vs GCA (11% vs 1%, p=0.01). Headache was the most frequently reported symptom in both groups. Patients with GCA reported jaw claudication (37%) as the second most frequently reported symptom, while COM reported arthralgia/arthritis (32%). Shoulder/neck pain was the third most important symptom in GCA (33%), while fatigue was the third most common complaint among COM (21%). Fatigue was reported as the fourth most common feature by 30% of GCA patients.
Conclusions: Headache was the most frequent and most severe symptom reported by patients with GCA and comparators. However, the reported frequencies and severities of other symptoms were significantly different between the two groups.

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Abstract FRI0312 – Table 1. Top 10 most recurrent patient-reported symptoms and correspondent severity rank in giant cell arteritis (GCA) and Comparators (COM)

Item	Frequency in GCA	Severity in GCA	Frequency in COM	Severity in COM	Examples of patient's own words
Headache	1	1, 2, 8	1	1, 2, 5	Headaches; Sore head; Thumping headache
Jaw claudication	2	3, 6	6	0	Jaw ache; Pain in jaw and teeth
Shoulder/neck pain	3	3, 4, 5,	0	0	Shoulder upper arm pain
Fatigue	4	5, 6, 10	3	3, 6, 7	Severe tiredness; Fatigue; No energy and exhausted
Myalgia or muscle weakness	5	5, 7, 10	4	3	Aching muscles; Achey limbs; Loss of strength in arms and legs
Blurred vision	6	10	5	4, 8	Blurred vision
Scalp tenderness	7	8	0	4	Irritation to the scalp; Tender scalp
Loss of appetite	8		0	0	Lack of appetite
Flu-like symptoms	9	9	0	0	General ill feeling; Flu-like symptoms; Unwell
Arthralgia or arthritis	10	9	2	3	Hip, knee more on right side; Pain in back of neck, ankles, wrists, and chest
Other ENT	0	0	7	4	Severe sinusitis; sore inside gums
Sudden visual loss	0	0	8		Loss of eyesight to both eyes; Vision loss
Night sweats	0	0	9	4, 8	Night sweats; Night fever sweats
Painful eyes	0	9	10	0	Shooting pain left eye; Pain right eye

FRI0313 THE EFFICACY AND SAFETY OF TOCILIZUMAB THERAPY IN PATIENTS WITH POLYMYALGIA RHEUMATICA WHO WERE RESISTANT OR INTOLERANT TO GLUCOCORTICOIDS AND ADDITIONAL METHOTREXATE

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Background: A recent trial of tocilizumab (TCZ) in patients with newly diagnosed polymyalgia rheumatica (PMR), conducted in Europe and the United States, has shown its efficacy and safety.
Objectives: We examined the efficacy and safety of TCZ for patients with PMR who had been primarily resistant or intolerant to glucocorticoids (GC) and additional methotrexate (MTX).
Methods: Sixty patients had been diagnosed with having PMR since 2011. The patients are all compatible with the 2012 EULAR/ACR provisional classification criteria for PMR, and had been treated first with GC and then, if they were resistant or intolerant to GC, were added MTX, similarly to the 2015 EULAR/ACR recommendations for the management of PMR. The disease activity were measured by PMR-AS.
Results: There were 17 patients with GC/MTX resistant or intolerant PMR (28%). Of them, 9 patients with PMR agreed to the proposal of TCZ addition, and their therapeutic responses to TCZ and its safety were determined. They were at the age of 68.2±10.6, including three males and six females. Before TCZ addition, the patients were treated with prednisolone (PSL) at 7.6±3.0 mg/day plus MTX at 7.1±5.1 mg/week, and serum CRP were at 1.0±1.0 mg/dL. After 8.4±5.7 months of TCZ treatment, PSL and MTX had been reduced to 1.1±1.3 mg/day and 3.3±4.5 mg/week, respectively, with CRP at 0.02±0 mg/dL. GC were able to be withdrawn in 5 patients, and MTX were further withdrawn in 4 patients. Two patients reached drug-free remission (PMR-AS=0.02). During TCZ therapy, each one patient showed the worsening of depression and occlusion of the central retinal vein.
Conclusions: These results indicate that TCZ may provide a therapeutic option for patients with severe PMR who were resistant or intolerant to GC and additional MTX.

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FRI0314 DIFFERENT SERUM CYTOKINE PROFILES REFLECT ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) SPECIFICITY IN PATIENTS WITH ANCA-ASSOCIATED VASCULITIS

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