(excluding treatment-related VDI from total VDI). We evaluated associations between initial GC dose and the primary outcomes.

Results: Of 477 patients registered in the original cohort studies, 161 patients were enrolled in the present study. Mean age ($\pm$ SD) were 74 ($\pm$ 5) in HD group, 74 ($\pm$ 5) in MD group, and 78 ($\pm$ 6) years in LD group, respectively. There was no significant difference in sex, disease severity, type of ANCA, C-reactive protein levels at baseline, Birmingham Vasculitis Activity Score at baseline, remission rates, and relapse rates. HD group exhibited significantly lower creatinine levels at baseline than MD and LD groups (216 ± 207 in HD, 339 ± 263 in MD, 331 ± 301 μ mol/L in LD, respectively; $p = 0.0012$). Proportion of concomitant cyclophosphamide use during 90 days after starting treatment for AAV decreased (58% in HD, 36% in MD, and 15% in LD, respectively; $p < 0.0001$) while disease activity-related VDI at 24th month increased (2.09 ± 1.39 in HD, 2.54 ± 1.16 in MD, and 2.83 ± 1.60 in LD, respectively; $p = 0.018$) as the initial GC dose went down. HD group developed serious infections more frequently than MD and LD groups (25/65 [38%] in HD, 10/50 [20%] in MD, 9/46 [20%], respectively; $p = 0.033$).

Conclusion: Based on safety outcome analysis, $0.6 \leq \text{PSL} < 0.8$ mg/kg/day might be optimal initial dose of GC for treatment of elderly-onset patients with AAV.

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PERSISTENT LOW-GRADE VASCULAR INFLAMMATION IN LARGE VESSEL VASCULITIS: A LONGITUDINAL STUDY USING FULLY INTEGRATED 18F-FDG PET/MR

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Background: Persistent low-grade vascular inflammation in large vessel vasculitis (LVV) treated patients could represent the expression of persistent subclinical disease activity or post-inflammatory vascular remodelling. Whether these findings have any impact on future vascular outcomes is still an unmet need¹.

Objectives: To evaluate the frequency and evolution of the low-grade vascular inflammation using a fully integrated 18F-FDG PET/MR in a longitudinally followed cohort of LVV patients.

Methods: All consecutive patients with LVV who underwent at least 2 PET/MR scans (median time 9[6] months) between January 2015 and January 2019 were included. For each scan vessel's metabolic activity was assessed using the Meller's grading and the standard uptake value². Low-grade inflammation was defined as Meller 1 and 2 (inferior or equal to liver), as previously reported. Demographic and clinical data, as well as disease remission or flares, were recorded and compared to vascular metabolic activity.

Results: In total, 107 PET scans were performed (from min. 2 scans to max. 5 scans per patient), mainly during follow-up (78.8%) in 33 LVV patients (72.7% GCA, 27.3% TAK), predominantly female (84.8%), with a regular BMI ($24.1[5.3]$) and with a long-standing disease ($30[29]$ months). At PET examination, low-grade metabolic activity was reported in 60% of the cases (86.4% GCA and 13.6% TAK), while complete remission in 15% and highly pathological in 25%. Comparing patients with low-grade vascular inflammation to those with complete remission (Meller 0), they resulted significantly older ($64[12]$ vs $57[33]$ years, $p=0.005$), with a lower disease duration ($26.5[21.4]$ vs $52.5[34.8]$ months, $p=0.001$) and with higher daily prednisone dosage, but without significance ($5[7.5]$ vs $2.5[8.75]$, $p=0.096$). No significant differences were noted in acute phase reactants and type of treatment. Moreover, when compared to those with high metabolic activity (Meller 3), patients with low-grade inflammation resulted significantly older ($64[12]$ vs $62[25]$ years, $p=0.025$), with a lower disease duration ($26.5[21.4]$ vs $33[46]$ months, $p=0.041$), lower CRP level, but without significance ($3.05[5.92]$ vs $10.35[13.75]$, $p=0.069$). Clinical remission, before PET examination, was registered in 55.6% of patients with Meller 3 activity, significantly lower compared to those with Meller 1 +2 (87.5%, $p=0.002$). Steroids and immunosuppressants tapering rate did not differ between patients with low-grade metabolic activity and those without activity.

Among all patients with low-grade vascular inflammation, 60% underwent to steroids or immunosuppressants tapering. At the subsequent PET examination, a persistence/worsening of metabolic activity was found in 88.9% of them. Change or increase of the treatment regimen led to an improvement (complete remission) in 58.9% of the cases. Low-grade metabolic activity was associated with a significant increased risk of worsening/flare at the subsequent PET examination (RR $5.29[1.87-16.11]$, $p=0.002$).

Conclusion: Low-grade vascular inflammation at PET examination is a common feature in LVV treated patients, especially GCA. It is significantly associated with an older age, lower disease duration and clinical remission. However, steroids or immunosuppressants tapering in these patients is associated with an increased risk of worsening/flare. Further research is urgently needed to address this issue.

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ADVENTITIAL FIBROBLAST, AN IMPORTANT PLAYER IN GIANT CELL ARTERITIS

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Background: Giant cell arteritis (GCA) is a systemic vasculitis affecting large vessels. The diagnosis is based on the temporal artery biopsy (TAB) which shows a segmental and focal arterial infiltration composed of CD4 T cells and macrophages. It is accompanied by a destruction of the internal elastic layer of the media and a hyperplasia of the intima by proliferation of myofibroblasts (Weyand). The origin of these myofibroblasts is controversial (Ly). Evidences suggest the activation of adventitial fibroblasts into myofibroblasts and their migration into the intima (Stenmark).

Objectives: The objective of this study was to determine whether adventitial fibroblasts migrate to the intima and thereby contribute to intimal hyperplasia during CGA.

Methods: Arterial sections from TAB of patients with GCA (n=24) and control subjects (n=24) were analyzed. Immunohistochemical analysis was