patients without cataract ($p=0.034$). Analysis of GC treatment effect on co-morbidities revealed a significant increase in prevalence of diabetes (after 3 months) and cataract (after 5 years) compared to baseline. BMI was significantly higher after one year and five years of GC treatment. PMR patients with cataract at baseline required longer treatment with GCs ($p=0.023$). Presence of other metabolic features at the time of GCA or PMR diagnosis did not affect the treatment duration (Figure 1). **Conclusion:** Newly-diagnosed GCA and PMR patients did not appear to have a healthier metabolic profile than HCs. As expected, GC treatment resulted in the development of an unhealthier metabolic profile in GCA patients. In PMR patients, the presence of cataract at baseline was predictive for a prolonged treatment period which could be explained by higher ESR levels in PMR patients with cataract. Together, our findings emphasize the importance of novel GC sparing therapeutic agents and personalized medicine in GCA and PMR.

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OP0068

EFFICACY AND SAFETY OF TNF- α ANTAGONISTS AND TOCILIZUMAB IN TAKAYASU ARTERITIS: MULTICENTER WORLDWIDE RETROSPECTIVE STUDY OF 209 PATIENTS

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Background: In this large worldwide TAK registry, we report 209 patients treated with TNF- α antagonists and tocilizumab aiming to compare their safety and efficacy, and determine the predictive factors of treatment response and relapse.

Objectives: To assess safety and efficacy of TNF- α antagonists and tocilizumab in patients with Takayasu arteritis (TAK).

Methods: We conducted a retrospective multicenter study in referral centers from France, Italy, Spain, Israel, Japan, Tunisia and Russia about biological-targeted therapies in TAK during the period from January 2017 to September 2019 for the data collection.

Results: Two-hundred nine patients with TAK [median age of 29 years [7-62], and 186 (89%) females] were included. They received either TNF- α antagonists [$n=132$ (63%) with 172 lines; infliximab ($n=109$), adalimumab ($n=45$), golimumab ($n=8$), certolizumab ($n=6$) and etanercept ($n=5$)], or tocilizumab [$n=77$ (37%) with 121 lines; intravenous and subcutaneous in 95 and 26 cases, respectively]. A complete response at 6 months was evidenced in 101/152 (66%) on TNF- α antagonists and 75/107 (70%) on tocilizumab, respectively. Age ≥ 30 years [OR= 2.09 [1.09; 3.99]] was associated with complete response, whereas vascular signs [0.26 [0.1; 0.65]], baseline prednisone ≥ 20 mg/day [0.51 [0.28; 0.93]] were negatively associated with the complete response to TNF- α antagonists or tocilizumab. During a median follow-up of 36 months, 103 relapses were noted. Supra-aortic branches and thoracic aorta involvements [HR 2.44 (1.06; 5.65) and 3.66 (1.18; 11.4), respectively], and systemic signs at baseline [HR 2.01 (1.30; 3.11)] were significantly associated with relapse. The cumulative incidence of treatment discontinuation and relapse were similar in TNF- α antagonists and tocilizumab. Fifty-eight (20%) adverse effects occurred on biological-targeted therapies of whom 37 (21%) and 21 (17%), ($p=0.4$) on TNF- α antagonists and tocilizumab, respectively.

Conclusion: This large multicenter study shows high efficacy of biological-targeted treatments in refractory TAK. Efficacy, relapse and drug retention rate were equivalent with TNF- α antagonists and tocilizumab.

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OP0069

THE ROLE OF POSITRON EMISSION TOMOGRAPHY/COMPUTED TOMOGRAPHY (PET/CT) IN DISEASE ACTIVITY ASSESSMENT IN PATIENTS WITH LARGE VESSEL VASCULITIS

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Background: Assessment of disease activity in large vessel vasculitis (LVV) is still an unmet need. PET Vascular Activity Score (PETVAS) is a new composite score aimed at quantifying the overall inflammatory burden by adding together PET qualitative visual scores (0-3, according to Meller) in nine selected arterial regions (1). In two independent cohorts, PETVAS showed to be effective in discriminating between patients with clinically active and inactive vasculitis.

Objectives: To assess the role of PET/CT and the performance of PETVAS in differentiating between clinically active and inactive vasculitis in a single center cohort of patients with LVV.

Methods: One-hundred patients with radiographic evidence of LVV were enrolled by the Rheumatology Unit of Reggio Emilia Hospital (Italy) between June 2007 and September 2020. All subjects underwent full clinical, laboratory and imaging evaluation (including PET/CT) at baseline, annually and when a relapse was suspected. Medical records of recruited patients were retrospectively reviewed from baseline visit until 30 September 2020, last follow-up or death.

For each PET/CT test, the nuclear medicine physician's interpretation of scans (active/inactive vasculitis) was compared with disease activity clinical judgement (active disease/remission). The latter was based on comprehensive signs/symptoms assessment, laboratory and imaging (excluding PET/CT) data and was considered the reference standard.

For each PET/CT scan, PETVAS score was calculated and its performance in discriminating between patients with active and inactive disease was compared to clinical judgement.

Results: In the study period 100 LVV patients [51 giant cell arteritis (GCA), 49 Takayasu arteritis (TAK)] underwent a total of 474 PET scans. Nuclear medicine physician's interpretation of PET/CT was able to discriminate between patients in clinically active LVV ($n=167$) and those in clinical remission ($n=307$) with a sensitivity of 60% (95% CI, 51 to 69%) and a specificity of 80% (95% CI, 75 to 84%). The following sensitivity and specificity values were found in LVV subgroups: 73% (95% CI, 59 to 84%) and 77% (95% CI, 70 to 83%) for TAK, and 51% (95% CI, 38 to 63%) and 82% (95% CI, 76 to 88%) for GCA, respectively.

LVV patients with higher PETVAS scores were more frequently classified as having active disease: age and sex adjusted OR 1.15 (95% CI, 1.11 to 1.19), $p<0.0001$. Similar results were found in LVV subgroups, [age and sex adjusted OR 1.12 (95% CI, 1.08 to 1.17) for GCA and 1.22 (95% CI, 1.14 to 1.31) for TAK, all $p<0.0001$].

The area under receiver operating characteristics (ROC) curve (AUC) of PETVAS in differentiating between clinically active and inactive LVV was 0.73 (95% CI, 0.68 to 0.79). Similar results were found in LVV subgroups, [0.70 (95% CI, 0.62 to 0.78) for GCA, and 0.79 (95% CI, 0.71 to 0.87) for TAK]. A PETVAS ≥ 10 provided 61% sensitivity and 80% specificity in differentiating between clinically active and inactive LVV (52% sensitivity and 82% specificity in GCA subgroup and 73% sensitivity and 78% specificity in TAK subgroup).

Conclusion: In our cohort PET/CT has shown to be useful in monitoring LVV disease activity.

PETVAS seems to be a reliable tool in helping clinicians to discriminate between LVV patients with active disease and those in remission.

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OP0070

ONSET TO DIAGNOSIS TIME PREDICTS SURVIVAL RATE IN TAKAYASU ARTERITIS

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Background: Takayasu arteritis (TA) is large vessel vasculitis. In spite of relatively high 5 to 15 years survival rate, TA affects young persons and causes major cardiovascular events, disability and preterm deaths [1]. Nowadays, though new