Conclusion: The finding of thoracic aortitis following aortic replacement surgery does not affect short-term post-operative mortality or morbidity. Corticosteroid therapy in the immediate post-operative period did not impact upon short-term outcomes.

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POS0805

TREATMENT OF GIANT CELL ARTERITIS WITH TOCILIZUMAB: A RETROSPECTIVE COHORT STUDY OF 119 PATIENTS

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Background: Giant cell arteritis (GCA) is an inflammatory condition of medium- and large-sized arteries. Prospective clinical trials have demonstrated the efficacy of tocilizumab (TCZ) for treatment of patients with GCA (1). However, there is a limited data on the use of TCZ in routine clinical practice.

Objectives: To evaluate the efficacy and safety of TCZ in a retrospective cohort study of patients with GCA treated with TCZ.

Methods: Patients with GCA treated with TCZ at 4 clinical centers of a single tertiary care institution (2000-2020) were identified. The diagnosis of GCA was confirmed by at least one of the following modalities: 1. Arterial biopsy 2. Large vessel imaging 3. Clinical diagnosis of GCA meeting ACR classification criteria and established by a rheumatologist. Patient demographics, clinical presentation, laboratory studies, treatment course and adverse events were abstracted from the medical record; only patients with at least 6 months of follow-up after TCZ initiation were included. Kaplan-Meier methods were used to estimate time to TCZ discontinuation and time to first relapse after TCZ discontinuation. Poisson regression models were used to compare relapse rates before and after TCZ initiation.

Results: The study cohort included 119 patients [61% female; mean (SD) age at GCA diagnosis 70.3 (8.2) years]. The majority of patients (89%) had a biopsy-proven and/or imaging-based diagnosis of GCA, while 13 (11%) had a clinical diagnosis of GCA. In addition to glucocorticoids, 40 (34%) patients received other immunosuppressive agents prior to TCZ. The method of initial TCZ administration was subcutaneous (162mg/ml) weekly in 48 (41%), subcutaneous every other week in 20 (17%), monthly 4mg/kg infusions in 34 (29%), monthly 8mg/kg infusions in 14 (12%) and non-standard dosing in 3 remaining patients. The median (IQR) duration from GCA diagnosis to TCZ initiation was 4.8 (1.2-22.0) months and the median (IQR) duration of TCZ treatment was 18 (11-28) months. The mean (SD) dose of prednisone at TCZ initiation was 31 (19) mg/day and was reduced to a mean (SD) dose of 3.9 (6.7) mg/day at TCZ discontinuation/last follow-up visit. The relapse rate per year decreased 43% from 0.77 to 0.44 after the initiation of TCZ (RR=0.57; 95% CI: 0.44-0.75; p<0.001). The mean (SD) ESR and CRP decreased from 22 (20) mm/hour to 6 (9.2) mm/hour and from 19.1 (25) mg/L to 5.4 (16.6) mg/L, respectively from TCZ initiation to TCZ discontinuation/last follow-up visit. At 2 years of follow-up, 67% of patients had discontinued glucocorticoids. At last follow up, 46 patients had discontinued TCZ, only 14 of which were due to adverse events. The median time to TCZ discontinuation was 2.9 years. Only 17% (95%CI: 10-24%) had discontinued by 1 year after TCZ initiation and 38% (95% CI: 26-47%) had discontinued by 2 years. The most common adverse events were infections and cytopenias. While on TCZ, 1 patient developed new onset vision loss related to GCA and 1 patient, without history of diverticulitis, had bowel perforation. Among those discontinuing TCZ, 61% had relapsed at least once by 1 year after TCZ discontinuation.

Conclusion: In this large single institution cohort of patients with GCA, TCZ use resulted in a significantly reduced relapse rate and reduction in glucocorticoid dosage. Overall, patients tolerated long-term use with only 12% discontinuing due to adverse events. However, over half of patients stopping TCZ had a subsequent flare; highlighting ongoing use may be required beyond two years in several patients with GCA to maintain remission.

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POS0806

FINDINGS CONSISTENT WITH SUBCLINICAL VASCULITIS IN PATIENTS WITH NEW ONSET POLYMYALGIA: A SYSTEMATIC LITERATURE REVIEW AND A META-ANALYSIS OF COHORT DATA

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Background: GCA is characterized by cranial symptoms but imaging techniques show that patients with non-specific symptoms such as systemic inflammation or PMR may have undiagnosed large vessel (LV) GCA¹. Although silent GCA in patients with clinically isolated PMR may have consequences for patients' outcome, little is known about its prevalence and characteristics of affected patients.

Objectives: To review data on the prevalence of silent GCA in newly diagnosed PMR patients without cranial GCA symptoms and to analyze which characteristics are associated with vascular involvement among PMR patients.

Methods: We systematically screened PubMed, Embase and Web of Science databases and included studies screening for GCA in steroid naïve PMR patients without cranial symptoms consistent with GCA. Authors of the publications that used PET for vasculitis screening were invited to share their individual patient data (IPD) for a meta-analysis. We sought to define patient characteristics that were associated with vasculitis using univariable mixed effects logistic regression models with vascular involvement as the outcome, missing values were imputed using multilevel joint modeling multiple imputation. To fit a multivariable model with the candidate predictors we excluded variables that were hypothesized to have less medical relevance for the outcome and highly correlated inflammation markers (ESR, Lc).

Results: Out of the 3047 studies screened independently by 2 authors (DG and TD), 13 fulfilled the inclusion criteria. These studies (published 1963-2019) reported on 543 PMR patients examined by temporal artery biopsy (n=175), ultrasound (n=110), PET or PET-CT (n=258). 115 PMR patients were diagnosed with GCA (21.2%), with prevalence ranging from 0-92%.

We collected IPD for 243 patients from 4 cohorts using PET and 3 using PET/CT for GCA diagnosis. The overall median age of patients was 72.3 years (IQR 66.4-78.0) and vasculitis was found in 65 patients (26.7%) (table 1).