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SAT0241 HEALED TEMPORAL ARTERITIS. ANALYSIS OF PATIENTS REFERRED TO RHEUMATOLOGY WITH A DIAGNOSIS OF TEMPORAL ARTERITIS

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Background: The diagnosis of giant cell arteritis (GCA), or temporal arteritis (TA), is a clinical one. Temporal artery biopsy is usually obtained to strengthen support for treatment. Unfortunately a biopsy does not always confirm the diagnosis; results can be reported as active, healed, or negative even in patients with all other features of giant cell arteritis. Histopathologic features suggestive of resolving inflammation are evident in healed TA, but these are non-specific and can also be seen in other conditions that are unlikely to benefit from prolonged steroid treatment. It is not clear if a pathological diagnosis of healed TA helps to support treatment which may be associated with significant toxicity.

Objectives: We analyzed clinical features of patients with "healed" TA and compared them to patients with active and negative biopsies with the goal of identifying any features that may aid treatment decisions.

Methods: Retrospective analysis of 49 patients with established TA diagnosis, seen at a rheumatology practice in Houston, Texas from 8/2007 to 12/2018. Fifty seven percent were referred by Ophthalmology, the rest by other specialties. Patients were divided into 3 groups based on biopsy: Active, Healed, and Negative. Clinical features analyzed at the time of presentation were gender, age of onset, fulfillment of the American College of Rheumatology (ACR) 1990 criteria for the classification of Giant Cell Arteritis and the 2016 revised ACR criteria for early diagnosis of Giant Cell Arteritis (rACR), and the presence of vision abnormalities, headache, temporal artery tenderness/induration, jaw claudication, fever, anemia, sedimentation rate at onset, and flares during follow up. Descriptive data was reported as means $\pm$ standard deviation for continuous variables and as proportions for categorical variables; analyzed with ANOVA and chi squared, respectively. Post hoc analysis with Bonferroni corrections and Fisher's exact tests were used. All analyses were

performed on Stata version 15 (StataCorp LP, College Station, TX, USA). A p-value of ≤ 0.05 was considered statistically significant.

Results: Thirty-two (65%) of the 49 patients were female and 17 (35%) were male. Biopsy reports showed active disease in 14 (28.5%), healed in 31 (63.3%) and negative in 4 (8.2%) patients. Average age was 72.7 years ± 6.3 , 73.0 ± 9.1 , 61.25 ± 1.3 years in these 3 groups, respectively (p value 0.008). The Active versus Healed groups were statistically different with respect to age (p 0.028), those meeting ACR and rACR criteria (p 0.029 and p 0.002), and the incidence of jaw claudication: 8 active (57.1%) versus 5 healed (16.1%) patients (p 0.05). There was no statistically significant difference in ophthalmologic manifestations, headache, temporal artery palpation, fever, anemia, and flares. In addition, 90% of patients reported side effects from steroids.

Conclusion: The percent of healed TA was 63.3%, higher than in other studies. Patients with healed TA were less likely to fulfill ACR and rACR criteria for giant cell arteritis. Further studies are needed to identify the subset of patients with healed TA who would have a clear benefit from high dose steroids, that would outweigh the treatment side effects. At the end of the day, the diagnosis of TA remains a clinical one and early involvement of Rheumatology may help avoid unnecessary biopsies and treatment. Ultrasound, MRA, and PET-CT scan may be able to fill the gap when biopsy fails to confirm the diagnosis.

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SAT0242 SENSITIVITY OF TEMPORAL ARTERY BIOPSY IN GIANT CELL ARTERITIS: SYSTEMATIC LITERATURE REVIEW AND META-ANALYSIS OF CLINICAL DATA

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Background: The role of temporal artery biopsy (TAB) as a reference test for the diagnosis of giant cell arteritis (GCA) is currently questioned by the use of non-invasive imaging techniques such as temporal artery ultrasonography (TA-US). Although TAB is highly specific, a subset of patients with a clinical diagnosis of GCA does not show the characteristic histopathological signs. The lack of knowledge of the proportion of GCA cases with positive findings on TAB hampers comparisons of the sensitivity of TAB and imaging tests for diagnosing GCA.

Objectives: We performed a systematic literature review and meta-analysis to estimate the sensitivity of TAB in GCA and to identify factors that may influence the estimate.

Methods: We searched MEDLINE via PubMed, EMBASE and CENTRAL databases for articles reporting TAB in GCA that were published from 1990 to 2017, with no language restriction. Eligibility criteria included studies with ≥ 30 GCA cases fulfilling the original or modified 1990 ACR classification criteria for GCA. From eligible publications, two independent researchers extracted the main methodological, geographic, demographic, and clinical characteristics and the number of TAB-positive cases among all cases with interpretable results for TAB. By meta-analysis, we computed the pooled proportion of TAB-positive GCA cases by using a random-effects model with a binomial-normal distribution and assessed heterogeneity by the I^2 statistic. Subgroup and meta-regression analyses were used to examine the effect of 16 covariates (e.g., geographic, demographic, clinical and study descriptors) on TAB positivity.

Results: Among 3820 screened publications, 32 independent studies (3092 GCA patients in total) were used for the analysis. The pooled proportion of TAB positivity was estimated at 77.3% (95% confidence interval 71.8–81.9%), with high between-study heterogeneity ($P=90\%$). Subgroup analysis suggested a potential influence of year of publication (Table). This result was confirmed by univariate ($P=0.0008$) and multivariate meta-regression ($P=0.0004$). No other analyzed covariate significantly influenced the sensitivity of TAB in GCA.

Conclusion: The 77% estimated sensitivity of TAB in GCA indicates that it is not inferior to that of TA-US (1). The decline in TAB-positive GCA cases over time could reflect an increasing propensity of clinicians to accept GCA diagnosis in the absence of proof by TAB. The unexplained high between-study heterogeneity could also result from differences in TAB sampling, processing or interpretation.

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