SAT0259
ANCA-ASSOCIATED VASCULITIS WITH RENAL INVOLVEMENT: THE ROLE OF A COMBINED HISTOPATHOLOGICAL ASSESSMENT AS PREDICTOR OF PATIENTS' PROGNOSIS
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Background: Anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis often affect the kidney and renal involvement has a considerable clinical impact on patients' prognosis. Currently used histopathological classifications are basically focused on the glomerular damage and assessing chronic damage progression, but their diagnostic role presents some limitations.

Objectives: To combine the Berden Classification, the ANCA Renal Risk Score (ARRS) and the Mayo Clinic-Renal Chronicity Score (RCS) with the inflammatory interstitial infiltrate and to evaluate the prognostic value of the combined assessment in patients with AAV

Methods: We included 19 AAV patients with renal involvement (mean age 63±13.2 years; disease duration 4.9±5.2 months) who underwent renal biopsy. Patients were classified according to age, sex, disease duration, ANCA positivity. The histopathological evaluation was performed assessing the Berden category, Risk group (low, medium, high) according to the ARRS and Chronicity class according to the RCS, and we also assessed the % of inflammatory interstitial infiltrate. Each patient was followed-up for 12 months; we considered the stage IV (eGFR < 30 ml/min/m²) of the KDIGO CKD Classification as renal outcome.

Results: 8 (42.1%) AAV patients were p-ANCA and 11 (57.9%) c-ANCA. 12 months after renal biopsy, 8 patients (42.1%) had a GFR <30 ml/min. According to the ARRS, 10 (52.6%) patients were in low, 7 (36.8%) in medium and 2 (10.5%) in high risk group. According to the RCS, 2 (10.5%) biopsies had minimal, 10 (52.6%) mild and 7 (36.8%) moderate chronic changes, no one presented severe chronic changes. According to the Berden classification, 6 (31.6%) samples represented the focal, 2 (10.5%) the crescentic and 11 (57.9%) the mixed category, no one represented the sclerotic class. The % of inflammatory infiltrate was 37.4±25.2. The inflammatory interstitial infiltrate showed a direct correlation with the severity of the Berden category (R=0.51; p=0.025), the % of sclerotic glomeruli (R=0.6; p=0.007) and the number of fibrocellular crescents (0.46; p=0.05) and an inverse correlation with the GFR at 12 months (R=-0.48; p=0.045). A ROC curve study identified a 22.5% cut-off of inflammatory infiltrate to predict the outcome of GFR at 12 months < 30 ml/min (sensitivity 88%, specificity 97.5%). Patients in focal class developed less frequently a GFR<30 (x²=9.1; p=0.003), but there were no differences in the outcomes between the crescentic and mixed class. ARRS could differentiate risk group with regard to the renal outcome stage IV (χ²=9.0; p>0.01) as well as the chronicity score (χ²=8.1; p=0.017). Finally, we built a matrix combining the different histopathological scores and the % of inflammatory infiltrate to predict the outcome; we found that an inflammatory infiltrate wider than 22.5% characterizes most of patients developing stage IV chronic renal failure at the 12th month. In fact, more than 75% of patients with eGFR < 30 ml/min had inflammatory infiltrate wider than 22.5% at biopsy, despite they were in the low risk class (ARRS) and in minimal changes class (RCS).

Conclusion: Our results underline the importance of the inflammatory infiltrate in renal outcome and histology. Despite the limited number of patients, our data suggest that a combined histological score assessing the chronicity and activity of renal disease from both glomerular and interstitial perspective could better predict patients' global and renal prognosis.

References:

SAT0260
PENTOXIFYLLINE GEL FOR ORAL ULCERS IN PATIENTS WITH BEHÇET’S SYNDROME
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Background: Oral ulcers, the hallmark lesion of Behçet’s syndrome (BS) can be disabling and impair eating, drinking and speaking. Despite recent advances in systemic medications for the treatment of oral ulcers, some patients do not achieve complete remission. Topical agents may help such patients by decreasing the size and duration of oral ulcers. Pentoxifylline (PTX) is a methylxanthine derivative that inhibits phosphodiesterase and is thought to have immunomodulatory effects in addition to improving blood flow which is its main reason for use in peripheral vascular disorders.

Objectives: The aim of this study is to assess the efficacy and safety of PTX gel for oral ulcers in patients with BS. We also aimed to explore the best tools for the assessment of treatment response to topical agents in randomized controlled trials (Clinicaltrials.gov ID: NCT 03888846).

References:

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Methods: This was an open-label, randomized, parallel group study comparing PTX gel in addition to colchicine (PTX-COL) with colchicine alone (COL). Patients with BS who were treated with colchicine and not using any other systemic medications for BS, having at least one oral ulcer that appeared during the last 48 hours were included. PTX 5% gel with a dose of 1000mg/day was applied in 4 divided doses per day for 14 days. Patients were contacted daily for 14 consecutive days. Photographs were taken every 24 - 48 hours and graphical processing software was used to calculate the area of the index ulcer. Duration of the index ulcer, time to start of index ulcer shrinkage, time to 50% reduction in oral ulcer pain on a 10 mm visual analog scale (VAS), change from baseline in the area of the index ulcer over time, total number of oral ulcers and adverse events were evaluated.

Results: A total of 41 patients were randomized, 39 patients (18 in the PTX-COL group and 21 in the COL group) completed the study and 2 patients in PTX-COL group withdrew from the study due to unacceptable dysgeusia and nausea. Mean duration of index ulcer, time to start of index ulcer shrinkage, time to 50% reduction in oral ulcer pain, and number of patients with no detectable ulcers on day 4 in each group were lower in the PTX-COL group as presented in the Table. Change from baseline in the area of index ulcer and pain score over time is shown in the Figure. There were no serious adverse events. Fifteen (75%) patients reported nausea, 11 (55%) reported dysgeusia and 2 reported vomiting in the PTX-COL group, while 2 patients (10%) reported nausea in the COL group.

Conclusion: This pilot phase 2 open label, randomized controlled study supports the hypothesis that topical PTX in addition to colchicine accelerates the healing of BS oral ulcers compared to colchicine alone. A phase 3 controlled study with a higher number of patients is planned with improving the taste for tolerability of the product.

Disclosure of Interests: Gulen Hatemi Grant/research support from: BMS, Celgene Corporation, Silk Road Therapeutics – grant/research support, Consultant of: Bayer, Eli Lilly – consultant, Speakers bureau: AbbVie, Mustafa Nevzat, Novartis, UCB – speaker, Berna Yurttas: None declared, Zekayi Kutlubay: None declared.

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SAT0261 FEATURES AND RISK FACTORS OF SERIOUS INFECTIONS IN ANCA ASSOCIATED VASCULITIS: LONG TERM FOLLOW UP OF 186 PATIENTS
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Background: Serious infections (SI) are one of the main complications in patients with ANCA associated vasculitides (AAV).

Objectives: We planned to investigate the prevalence, features and risk factors of SI in our AAV cohort during follow-up.

Methods: Outpatient and hospital data of patients diagnosed with granulomatous polyangitis (GPA), microscopic polyangitis (MPA) and eosinophilic granulomatous polyangitis (eGPA) between 1999 and 2019 according to Chapel Hill Consensus Criteria and followed up at least 6 months in our vasculitis clinic were evaluated. Development of sepsis, requirement for intravenous (IV) antibiotic therapy and/or hospitalization during infection episodes were considered as SI. Chi-square, student’s t-test and logistic regression analysis were used for statistical analysis.

Results: Study was conducted with 186 (53.6%) female patients with adequate follow-up data. Mean age of diagnosis was 54.3±14.5 (23-79), mean follow-up duration was 86.4±54.3 (6-251) months. Number of GPA, MPA and eGPA patients were 132 (71%), 42 (22.5%) and 12 (6.5%), respectively. IV cyclophosphamide (CYC) was used in 148 (78.9%), azathioprin in 105 (56.5%), rituximab (RTX) in 69 (%37.1), methotrexate in 29 (15.6%) and mycophenolate mofetil in 14 (7.5%) patients. Number of patients developed SI was 66 (34.7%), total SI episode was 86, patients who had multiple episodes was 15. All SI is shown in Table-1.

Bacterial pneumonia was the most common diagnosis and 26 of SI (30.2%) were considered as opportunistic (systemic viral, parasite, fungus) infections. Thirty-one of patients developed SI (40.7%) in the first year after diagnosis. SI were observed more frequently in the presence of major organ involvement (kidney, lung, neurological) (65/173 vs. 1.13 p = 0.02 OR = 8.7 95% CI 1.06-64.4). Diffuse alveolar hemorrhage (DAH) was associated with SI in multivariate analysis (12/52 vs. 0.34 p=0.007 OR=1.16 95% CI 1.3-1.98). Cumulative CYC dose was significantly higher in patients with SI (14.6±11 vs. 8.2±13.9 p=0.045). During maintenance, patients treated with RTX had significantly more SI (18/53 vs. 17/99 p=0.19 OR=3.3 95% CI 1.15-7.07), Hypogammaglobulinemia (HlgG) (lgG<700mg/dL) was present in 1 (12%) SI patients. HlgG was associated with SI in RTX-treated patients (5/13 vs. 7/47 p=0.03 OR=4.2, CI=1-16.5). Hospitalization need for SI was 65%. Disease flares (34/128 vs. 32/62 p = 0.001 %95 CI = 2.9 95% CI 1.6-5.6) and organ damage presence were more common (64/65 vs. 109/125 p = 0.01 95% OR= 8.9 95% CI 1.1-68.9) in patients with a history of SI in multivariate analysis. SI was confirmed as cause of death in three cases.

Conclusion: Long-term follow-up results of a single center cohort of AAV patients revealed that approximately one third of patients developed SI, most frequently in the first year of treatment. During the maintenance period, the risk of SI continues. Cumulative CYC dosage and maintenance with RTX is associated with SI, especially in patients who developed hlgG. Major organ involvement, disease flares and organ damage are significant risk factors for SI. In this regard, protection measures (vaccination, prophylaxis) should be reviewed and the quality of follow-up should be improved.

Table 1. Serious infections in AAV patients.

<table>
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<th>N</th>
<th>FUNGAL</th>
<th>N</th>
<th>VIRAL</th>
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Disclosure of Interests: None declared.

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SAT0262 PROPOSAL FOR OPTIMIZATION OF DIAGNOSTIC IMAGING FOR GIANT CELL ARTERITIS USING THREE-DIMENSIONAL COMPUTED TOMOGRAPHY ANGIOGRAPHY IMAGE AND CONSTRUCTING VASCULAR MAPPING FROM VASCULAR ULTRASONOGRAPHY AS REFERENCES
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Incorporating 3D CT Imaging and Vascular Imaging for Improved Diagnosis and Follow Up of Giant Cell Arteritis

Background: Giant cell arteritis (GCA) is an inflammatory vasculitis that affects the medium and large arteries. It is most commonly found in the temporal arteries (TA), causing pain and tenderness in the temporal region. However, GCA can also involve other arteries, including the coronary arteries and the aorta. The diagnosis of GCA is usually based on clinical symptoms and laboratory findings, such as an elevated erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels. In some cases, a temporal artery biopsy is required to confirm the diagnosis.

Methods: This study aimed to evaluate the feasibility and accuracy of using 3D computed tomography (CT) imaging and vascular mapping for the diagnosis and follow-up of GCA. A total of 50 patients with a clinical diagnosis of GCA were included in the study. Patients underwent 3D CT imaging of the temporal arteries and aortoiliac arteries, as well as vascular mapping using overlapping two-dimensional (2D) sonograms of the temporal arteries.

Results: The 3D CT images provided detailed visualization of the temporal arteries and aortoiliac arteries, allowing for accurate identification of any calcification or stenosis. Vascular mapping using overlapping 2D sonograms also provided valuable information about the arterial wall thickness and luminal narrowing. The combination of 3D CT imaging and vascular mapping significantly improved the diagnostic accuracy of GCA compared to conventional imaging techniques.

Conclusion: The proposed method of using 3D CT imaging and vascular mapping can significantly improve the diagnosis and follow-up of GCA, providing more accurate and detailed information about the arterial structures involved.

Disclosure of Interests: None declared.

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