and serum HMGB-1 level; whereas, we found a positive correlation with both BDCAF and BSAS². This suggests that HMGB-1 can be used as a new disease activity parameter in BS. In conclusion, this study is unique as it involves the largest number of BS patients and uses BDCAF and BSAS together to assess disease activity

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4232

AB0496

AUTOANTIBODIES TARGETING COMPLEMENT RECEPTORS 3A AND 5A1 ARE DECREASED IN ANCA-ASSOCIATED VASCULITIS AND CORRELATE WITH HIGHER RELAPSE RATE.

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Background: Activation of the alternative and final common pathways have been shown in ANCA-associated vasculitis (AAV) (1). Circulating titers of C5a are elevated and correlate with disease activity in AAV. Binding to the corresponding G protein-coupled receptor (GPCR) C5aR1 enhances the influx of neutrophils, leading to ROS generation and severe necrotizing of vascular walls (2). Moreover, subsequent interaction of C5a with C5aR1 may represent a proinflammatory amplification loop (3). Blocking of the receptor is protective in a murine model in AAV (4). In humans, avacopan, a C5aR1-inhibitor showed promising results as glucocorticoid-sparing agent in two randomized phase II and one ongoing phase III clinical trials in AAV (NCT02994927). Notably, disease-specific anti-GPCR autoantibody (aab) signatures have been found in different autoimmune diseases (5).

Objectives: The aim of the present study was to examine whether (patho)physiological anti-C3aR and anti-C5aR1 aabs correlate with clinical findings in AAV, and whether this is linked to the clinical outcome.

Methods: Sera and plasma of AAV patients [granulomatosis with polyangiitis (GPA), n=64; microscopic polyangiitis (MPA), n=26; eosinophilic granulomatosis with polyangiitis (EGPA), n=11] were measured by Elisa for circulating autoantibodies against complement receptors C3a (anti-C3aR aab) and C5a (anti-C5aR1 aab) and plasma levels of C3a and C5a. Expression of C3aR and C5aR1 on T-cells was determined using flow cytometry. Clinical data were assessed at the time of serum sampling and during follow-up for 48 months

Results: GPA displayed low titers of anti-C3aR aab (GPA:5.33±2.54 vs. HD:6.47±2.61, P=0.0031). Anti-C5aR1 aab were decreased in AAV, especially in GPA (GPA:1.02±1.07 vs. HD:6.63±2.91, P<0.0001). Plasma levels of C5a and anti-C5aR aab yielded an inverse correlation in AAV (r=-0.6813, P=0.0127). C5aR1 expression was increased on T-cells in GPA (CD4+C5aR1+T-cells: GPA:10.76±2.55% vs. HD:3.44±0.68%, P=0.0021; CD8+C5aR1+T-cells: GPA:9.74±2.10% vs. HD:4.11±0.92%, P=0.0198). Reduced titers of anti-C5aR1 aab <0.45U/ml displayed an increased relapse risk for major organ involvement in GPA (HR 12.85, P=0.0014).

Conclusion: As potential diagnostic marker, anti-C5aR1 aab titer may additionally be useful to monitor disease activity in AAV.

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Disclosure of Interests: Sebastian Klapa Grant/research support from: Actelion, Consultant of: Pfizer, Abbvie, Antje Müller: None declared, Andreas Koch: None declared, Anja Kerstein-Staehle: None declared, Wataru Kaehler: None declared, Harald Heidecke Shareholder of: Cell Trend GmbH, Employee of: Cell Trend GmbH, Speakers bureau: Cell Trend GmbH, Susanne Schinke Speakers bureau: Pfizer, Markus Huber-Lang: None declared, Martin Nitschke: None declared, Silke Pittann: None declared, Christian Karsten: None declared, Gabriela Riemekasten Consultant of: Cell Trend GmbH, Janssen, Actelion, Boehringer Ingelheim, Speakers bureau: Actelion, Novartis, Janssen, Roche, GlaxoSmith-Kline, Boehringer Ingelheim, Pfizer, Peter Lamprecht: None declared

DOI: 10.1136/annrheumdis-2020-eular.1758

AB0497

RENAL INVOLVEMENT IN ANCA-ASSOCIATED VASCULITIS: DO THE PRESENCE OF ANCA AND THEIR TYPE MATTER?

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Background: The role of ANCA type is well established for the risk of relapses of ANCA-associated vasculitis (AAV). However their association with renal involvement and its outcomes is less well understood.

Objectives: To assess clinical and morphological features of ANCA-associated glomerulonephritis (ANCA-GN) and renal survival in ANCA-negative patients, proteinase-3-ANCA (pr3-ANCA) positive and myeloperoxidase-ANCA (MPO-ANCA) positive patients.

Methods: We enrolled 53 patients with AAV, diagnosed according to Chapel Hill Consensus Conference (2012) definition and/or ACR (1990) criteria, with histologically proven renal involvement. There were 13 (24.5%) males, median age at onset was 48 (33; 57) years. Seven patients were ANCA-negative (13.3%), 17 (32.0%) patients were pr3-ANCA positive and 29 (54.7%) patients were MPO-ANCA-positive. ANCA-associated glomerulonephritis (ANCA-GN) class was established according to Berden et al classification.¹ We retrospectively assessed ANCA renal risk score (ARRS) at disease onset.² Twelve patients (22.6%) developed end-stage renal disease (ESRD) after a median of 12 (6.5; 28) months. Renal survival rates were assessed by Kaplan-Meier method and compared by log-rank test.

Results: The only significant difference was median BVAS score which was significantly higher in pr3-ANCA-positive (18 (17;20)) than in MPO-ANCA positive patients (15 (12; 18), p=0.012). Creatinine levels, eGFR, percentage of glomeruli with crescents, global sclerosis, and interstitial fibrosis and tubular atrophy didn't depend on the presence of ANCA or type of the antibodies. The proportion of patients with focal, crescentic, mixed of sclerotic class of ANCA-GN was similar in all groups. There was no significant difference in the numbers of patients with low, medium or high risk of ESRD according to ARRS. One- and three-year renal survival rates were similar in ANCA-negative (81.7% and 60.0% respectively) and ANCA-positive patients (84.2% and 74.6% respectively, Figure 1A). One-year and three-year survival rates were higher in MPO-ANCA-positive (84.4% and 84.4% respectively) than in pr3-ANCA-positive patients (73.1% and 50.1% respectively), however the difference was not statistically significant (Figure 1B).

Figure 1. Kaplan-Meier curves showing renal survival in ANCA-positive and ANCA-negative patients (A), and pr3-ANCA-positive and MPO-ANCA-positive patients (B)