with eGFR and TP clinically ($\beta=0.955$, 3.349; $p=0.025$, 0.008), and with CS pathologically ($\beta=1.231$, $p=0.028$). Neither AS nor AS-WL was included in the prognostic factors. Kaplan-Meier method with log-rank tests showed a significant difference in cumulative rate of CKD and/or death between CS ≥ 3 and CS < 3 groups ($p=0.049$).

Conclusion: AS and CS were related to different clinical parameters at the time of renal biopsy. CS was associated with renal and life prognoses, while neither AS nor AS-WL was. These results revealed that these scores have different clinicopathological significance in LN.

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Vasculitis

FRI0189

ENDOTHELIAL PROTEIN C RECEPTOR AND SCAVENGER RECEPTOR CLASS B TYPE 1 NEGATIVELY REGULATE ENDOTHELIAL ACTIVATION AND REPRESENT NOVEL AUTOANTIGENS IN TAKAYASU ARTERITIS

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Background: Takayasu arteritis (TAK) is a chronic granulomatous vasculitis and affects large vessels in young female. It has been recognized that high numbers of patients with TAK possessed autoantibodies against vascular endothelium, which are called anti-endothelial cell antibodies (AECAs). Although their target antigens had not been identified for a long time, we utilized an expression cloning system for specific identification of cell-surface antigens and successfully identified endothelial protein C receptor (EPCR) and scavenger receptor class B type 1 (SR-BI) as major novel autoantigens in TAK. It was possible that identified novel autoantibodies were utilized for clinical application and elucidating pathomechanisms of TAK.

Objectives: To reveal the clinical impact and pathogenic potential of novel autoantibodies in TAK

Methods: Three hundred twenty-five patients with autoimmune diseases were enrolled: 80, TAK; 10, giant cell arteritis (GCA); and 235, other autoimmune diseases. The expressions of EPCR and SR-BI were examined in the aortic tissue from several diseases by immunohistochemistry. The presence of novel autoantibodies was measured in TAK and other autoimmune diseases. Clinical characteristics of patients with these autoantibodies were evaluated in TAK. To investigate the pathogenetic potential of these novel autoantibodies, vascular endothelial cells from umbilical vein, aortic artery, and pulmonary artery were examined for the endothelial cell activation. The effects of the novel autoantibodies upon the differentiation of immune cells were also evaluated.

Results: In non-inflammatory aortic tissue, the expressions of EPCR and SR-BI were observed in the endothelium of vasa vasorum. Their expressions in the endothelium were augmented in TAK tissue. Novel autoantibodies against EPCR or SR-BI were detected in 34.6 % or 36.5 % of cases, respectively in TAK, and overlap was observed only in two cases, indicating their exclusive nature. These autoantibodies were specific for TAK among autoimmune rheumatic diseases, and they were not detected in patients with GCA with cranial involvement, suggesting different pathomechanisms among these diseases. The clinical characteristics of patients with anti-EPCR autoantibodies included high prevalence of stroke and ulcerative colitis. Surprisingly, anti-EPCR autoantibodies were also detected in patients with primary ulcerative colitis, suggesting their common pathomechanisms with TAK. Serial measurement of these novel autoantibodies revealed their correlation with disease activity of TAK. In mechanistic studies, EPCR and SR-BI functioned as negative regulators of endothelial activation and chemokine production. EPCR further functioned in human T cells and ameliorated Th17 differentiation. Autoantibodies against EPCR and SR-BI blocked the functions of their targets, thereby promoting pro-inflammatory phenotype.

Conclusion: EPCR and SR-BI are preferentially expressed in the endothelium of vasa vasorum and upregulated in TAK tissue. Autoantibodies against EPCR or SR-BI are specific for TAK among autoimmune rheumatic conditions and detected in about 70 % of TAK, suggesting their usefulness for the diagnosis, subclassification, and monitoring of TAK. Autoantibodies inhibit the resolution of activated immune responses and thus would lead to the chronic vascular inflammation.

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FRI0190

COMPARATIVE EFFICACY AND SAFETY OF MYCOPHENOLATE MOFETIL VERSUS CYCLOPHOSPHAMIDE IN PATIENTS WITH ACTIVE ANTINEUTROPHIL CYTOPLASMIC ANTIBODY-ASSOCIATED VASCULITIS: A META-ANALYSIS OF RANDOMIZED TRIALS

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Background: Cyclophosphamide (CYC) is effective for induction of remission of AAV, resulting in complete remission rates of around 70%. Thus, CYC has been the standard remission induction therapy for antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV); however, it is toxic and causes infections, malignancies, and infertility. Therefore, other agents that are less toxic but that have similar efficacy were explored. Since the disease course of AAV usually requires long-term immunosuppression, mycophenolate mofetil (MMF), a less toxic agent compared to CYC, has been explored as an alternative to CYC.

Objectives: The aim of this study is to assess the efficacy and safety of MMF versus cyclophosphamide CYC in patients with active AAV.

Methods: We performed a meta-analysis of four randomized clinical trials (RCTs) (300 patients) to examine the relative efficacy and safety of MMF compared to CYC in patients with active AAV.

Results: There was no significant difference in remission at 6 months between MMF and CYC (OR 1.311, 95% confidence interval [CI] 0.570 – 3.017, $P = 0.524$). Additionally, the relapse rate did not differ between the MMF group and CYC group (OR 1.331, 95% CI 0.497 – 3.568, $P = 0.570$). There was no significant difference in serious adverse event (SAE) (OR 1.232, 95% CI 0.754 – 2.014, $P = 0.404$) and infection rate (OR 0.958, 95% CI 0.561 – 1.634, $P = 0.873$) between the MMF and CYC groups. Some heterogeneity was found in the meta-analysis of remission and relapse rate ($I^2 = 57.4\%$, 63.4%), but no between-study heterogeneity was found during the meta-analysis of the SAE and infection rate. Egger's regression test showed no evidence of publication bias (Egger's regression test P -values > 0.1).

Conclusion: MMF was an equally effective alternative treatment to CYC, and MMF was comparable to CYC in patients with active AAV in terms of safety, suggesting that MMF can be used as an alternative to CYC for remission induction in AAV.

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FRI0191

CRANIAL-LIMITED AND LARGE-VESSEL GIANT CELL ARTERITIS: PRESENTING FEATURES AND OUTCOME

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Background: Giant cell arteritis (GCA) comprises two main phenotypes: cranial (C) and large-vessel (LV) disease¹. A full baseline steroid-free vascular imaging evaluation is required to properly diagnose LV involvement²