CHANGES IN PLASMINOGEN AND TNF-α SERUM LEVELS IN PATIENTS WITH GRANULOMATOSIS WITH POLYANGIITIS ON RITUXIMAB THERAPY

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Aim: Granulomatosis with polyangiitis (GPA), also known as Wegener's granulomatosis, is the most common systemic vasculitis associated with anti-neutrophil cytoplasmic antibodies (ANCA). Literature data show that B-cells, together with inflammatory cytokines and plasma factors, play a key role in the immunopathogenesis of GPA. In line with aforementioned, we aimed to monitor the dynamics in plasminogen and TNF-α serum levels in patients with GPA, treated with conventional therapy and those with added to the therapy monoclonal antibody Rituximab, which causes B-cell depletion**.**

Materials and methods: 31 patients with GPA were tested for the presence of ANCA by indirect immunofluorescence. The serum levels of ANCA antibodies against proteinase 3 (PR3) and myeloperoxidase (MPO), as well as plasminogen and TNF-α concentrations, were determined by ELISA.

Results: The results showed a decrease in ANCA antibodies concentration in both treatment groups. There was also significantly increase in the concentration of plasminogen and lowering of TNF-α levels in GPA patients treated with Rituximab ($p<0.05$) in comparison with those patients on conventional therapy.

Conclusion: Rituximab administration is considered a successful approach to therapy in GPA, but there are some unclear aspects in the mechanisms of action, leading to changes in the serum levels of inflammatory cytokine TNF-α and plasminogen.