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R/5. COMPLEMENT FACTOR H AUTOANTIBODIES B CELL EPITOPE ANALYSIS IN AUTOIMMUNE HAEMOLYTIC UREMIC SYNDROME

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Introduction: One of the most common factors evoking acute renal failure in children is hemolytic uremic syndrome (HUS), the rare form of which is mediated by autoantibodies against complement factor H (FH). In patients with anti-FH autoantibodies mutation of FH related proteins (CFHR), most often CFHR1-3 is observed. FH domains 19-20 and the homologous ones of CFHR1 differ in two amino acids. This slight difference could result in a binding site for the antibodies on both FH and CFHR1. **Purpose:** B-cell epitope mapping of anti-FH autoantibodies, and investigation of the inhibitory effect of CFHR1 domains 4-5 on antibody binding to FH. **Methods:** We analysed 5, anti-FH IgG positive patients' sera taken in the first episode of the disease. As control sera of healthy children and patients' sera from remission served. The amount of reacting antibodies with certain peptides of FH and CFHR1 was measured by altered ELISA method. We used competitive

ELISA technique to investigate antibody binding to FH in presence of FH domains 19-20 and CFHR1 domains 4-5. **Results:** In controls enhanced reactivity was measured in three regions (AA1142-1156, AA1182-1196, AA1192-1216). In these regions appreciable antibody binding was observed in patients' sample, and in two more, in controls undetected positions (AA1157-1171, AA1177-1191). Antibody binding was detected in patients' sera to CFHR1, too. Although in competitive assays FH showed significantly stronger inhibition than CFHR1, both were capable to maximally inhibit antibody binding to FH. **Conclusion:** We identified specific epitopes localised on FH domains 19-20 in autoimmune HUS patients, further analysis of which might lead to the exploration of the autoantibody productions' mechanism. Besides we found that several surface epitopes of FH and CFHR1 determine the inhibition of antibody binding to FH, according to which the effect of CFHR1 is to be considered when applying plasmapheresis in acute phases of autoimmune HUS.

POSTER SESSION IV.

S. Pediatrics-Obstetrics & Gynecology
-Surgery -Internal Medicine-Family
Medicine-Orthopedics

S/1. COMPARATIVE ASSESSMENT OF QUALITY OF LIFE (QOL) AMONG THE 6-17 YEARS OLD PATIENTS SUFFERING FROM ISOLATED ALLERGIC RHINITIS (AR), ALLERGIC RHINITIS AND ASTHMA (AR+A), ISOLATED ASTHMA (A)

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