**The role of the system of complement in enlargement of Henoch-Schönlein purpura in children**

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Actuality. Annually Henoch-Schönlein purpura(HSP) affects 10 to 20 children per 100,000 population. It is the most common vasculitis of childhood. It is proved the immunocomplex nature of HSP, so studying of content of the complement system, C3 and C4, is important.

Aim of studying. Studying the role of the complement system C3 and C4 in enlargement and progressing of HSP in children.

Materials and Methods. The research was conducted in Kharkiv Municipal Clinical Children's Hospital №16.We analyzed case histories and laboratory data of 44 children with HSP aged 2 to 18 years old with skin, skin –joint , abdominal and mixed forms of I, II, III degrees of activity. The definition of the components of complement C3 and C4 ELISA was performed using standard sets «ELISA C3 and C4" .

Results. In the acute phase of HSP the decrease values ​​factions were regisrered - C3 1.20 (1.04; 1.35) and C4 0.39 (0.33; 0.43) in serum in all forms of HSP in comparing with the control group , p <0.05. The similar situation was registered in remission of HSP: C3 1.15 (0.92; 1.38) and C4 0.34 (0.27; 0.37), p> 0.05. For skin and skin - joint forms of HSP was reducing of the levels of C 3 and C 4 fractions complement was more pronounced and significant C3 1.24 (1.12; 1.36), C4 0.39 (0.33; 0.43) and C3 1 09 (1.03; 1.19), C4 0.39 (0.35; 0.43), respectively, at p> 0.05 than in mixed and with renal syndrome forms C3 1.34 (1.15; 1.42), C4 0.40 (0.37; 0.44) and C3 1.35 (1.17; 1.44) respectively, p> 0.05, are clinically manifestated more seriously and actively with poorer prognosis. Analysis of C3 fraction of complement, depending on the level of activity showed a marked decrease in C3 1.09 (1.03; 1.19) in the first and second levels of activity than in the 3d level of activity of C3 1.29 (1, 23; 1.38), and the level of C 4 fractions complement the contrary, at lower (C4 0.35 (0.32, 0.39) and 0.29 (0.27, 0.35), respectively), values ​​at and II degree of activity in the third degree of activity in the acute phase of the disease exceeded C4 0.95 (0.84; 0.97) standard rates almost 2 times (p> 0.05). In remission values ​​of C 4 fractions had a clear tendency to normalize, while at the lower boundary of normative values ​​and rates of C3 fraction of complement remained below normative values.

Conclusion. Activation of the complement system has a great impac t on the formation of the vast majority of clinical and laboratory manifestations of HSP in children. In the acute phase the decrease in the values ​​of fractions C3 and C4 in serumwas registered in all forms.