

Comment

This issue of "Progress in Medicine" has been prepared by the Department of Immunohaematology in Centre of Postgraduate Medical Education in cooperation with authors from the Clinical Department of Pediatrics, Haematology and Oncology, Medical University of Warsaw, the Clinical Department of Pediatrics in our Centre and the Institute of Haematology and Blood Transfusion. It is dedicated to the problems of haematology and immunology which are the subject of studies in the Department of Immunohaematology. Our research concerns congenital and acquired mechanisms of destruction of red blood cells.

The results of genetic tests detecting mutations responsible for thalassemia α were described in the paper entitled: "Molecular diagnostics of thalassemia α in Polish population" and the preliminary assessment of erythrocyte membrane protein deficiency in the congenital spherocytosis in the paper: "Defects of erythrocyte membrane proteins in patients with hereditary spherocytosis". In tests of red blood cell immunology serological methods are used usually. In the publication entitled: "Detection of fetomaternal haemorrhage using microcolumn agglutination test" we present the results obtained during evaluation various mixtures of blood from RhD negative and RhD positive donors imitating fetomaternal haemorrhage. It was a part of our study referring to immunoprophylaxis for haemolytic disease of fetus and newborn. In the next paper: "The presence of anti-D antibodies after kidney and liver transplantation in cases of ABO identical donor-recipient pairs" detection of anti-D alloantibodies in serological minor RhD-incompatibility in four RhD positive recipients who received organs from RhD negative immunized female donors have been described. In the paper: "Autoimmune haemolytic anaemia in children in the first year of life – preliminary report" the authors present detection and characteristics of auto-antibody in three infants, their clinical symptoms and therapy including transfusions with special red blood cell selection.

In this issue the first published review paper entitled: "Three new blood group systems" is a continuation of a paper in "Progress in Medicine" prepared by us in 2012: "New blood group systems". It is associated with rapid changes in the classification of antigens and blood group systems following the development of molecular researches. Today we know 342 antigens and 35 group systems, and three of them were described in 2015. In most immunohaematological studies flow cytometry methods are used, but in the study of congenital defects of red blood cells (microcytosis, spherocytosis) we also use the biochemical methods, and in thalassemia α as well as genetic ones. Review paper related to the ongoing original study about microcytosis, including thalassemia α is entitled: "Oxidative stress in red blood cells from donors and patients with thalassemsias and haemoglobinopathies". Apart from the defects of erythrocytes in haematological diseases clinically significant changes may occur during storage of red blood cells. We describe them in the paper: "Alterations of red blood cells stored in blood banks". Our original studies on this topic were completed in 2015. To general overview of immunology, not just concerning red blood cells but also interactions between other blood cells we present papers: "New T CD4+ helper cells subpopulations" and "Possible diagnostic role of cell membrane microparticles". They present the knowledge from numerous publications that appeared in the last few years.

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