

ABSTRACT

Background: The knowledge of antigens expressed on red blood cells is an integral part of a transfusion medicine that uses this knowledge for effective and more safe hemotherapy. The aim of this work is to create an overview of selected important blood group systems and to compile existing knowledge into one document.

Main findings: Most antigenic structures on erythrocytes are included in group systems that provide better lucidity and orientation. Each group system contains both antigens and relevant antibodies, whose importance is clinically specific. Expression of the antigens on erythrocyte is always given by genetics, so it is possible to find links between belonging to some blood group and appearance of some diseases.

Conclusions: There have been sought information about individual group systems, their antigens and their antibodies. In antigens especially about their structure and genetic background, in antibodies especially about their particular reactivity and clinical relevance. These already existing facts have been compared with some selected clinical trials and there has also been referred to associations of blood antigens with the occurrence of some pathological conditions.

Keywords: antigen, antibody, blood group system, blood transfusion