Bahrain Medical Bulletin, Vol. 27, No. 2, June 2005

Red Cell Alloimmunization in Thalassaemia Patients

Layla AM Bashawri, MD, KFUF (CP)* Malik S Ahmed, MS, MLT**
Naglaa El-Fawaz, PhD***
Ahlam AK AL-Qatary, MD, KFUF (CP)**** Mirghani Ali Ahmed, MD*****

Objectives: To determine the frequency of red cell alloantibodies in a thalassaemia patient and to identify the common alloantibodies.

Methods: A retrospective review of blood bank records for all thalassaemia patients. The records included, request received for blood group typing, antibody screen, antibody identification and cross-matching during the period between October 1st, 1997 to September 30, 2002. The history of blood transfusion was reviewed and the frequency rate for alloantibodies was determined.

Results: Out of 76 thalassemic patients, nine (11.8%) had developed alloantibodies. Alloantibodies detected include: nonspecific antibodies 3 (33.3%), anti E and nonspecific 2 (22.2%), anti-K together with non specific antibodies 1 (11.1%), anti-E 1 (11.1%), anti E together with anti K and nonspecific alloantibodes 1 (11.1%), anti-Le^a 1 (11.1%).

Conclusion: Red cell alloantibodies developed in 11.8% of thalassemic patients. The most common alloantibodies were Rhesus and Kell antibodies, which are present in 33.3% and 22.2% of these patients respectively. Alloimmunization is not an uncommon problem facing blood banks and finding compatible units for regularly transfused thalassemic patients may be very difficult. In order to reduce alloimmunization a policy for performing extended red cell phenotyping on these

patients is essential and at least antigen Kell and E negative blood should be provided for transfusion to these patients.