Alloimmunization in Thalassemia Patients: New Insight for Healthcare


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Abstract

Background:
Development of alloantibodies against the foreign red blood cell (RBC) (alloimmunization) is a well-known complication in thalassemia patients when performing multiple transfusions. The study was conducted to know the prevalence of alloimmunization in thalassemia patients, in the Caspian Sea coastline.

Methods:
This study is a descriptive, retrospective analysis of transfusion records of patients with β-thalassemia major who received regular transfusions. To detect the type of alloantibodies, two cells panel tests (kits; Iranian Blood Transfusion Organization [IBTO], RBC cells and IBTO, RBC cells) were used.

Results:
Forty-seven patients were positive for alloantibodies. Of them, cases had only one alloantibody, and cases had at least two or more of alloantibodies. The vast majority of alloantibodies were anti-Kell followed by anti-E, and anti-D, respectively.

Conclusions:
Blood matching for Rh and K antigens in patients with transfusion-dependent thalassemia could reduce the rate of RBC alloimmunization.

Keywords: Alloantibody, blood transfusion, Iran, thalassemia