

## Original Paper

# Prevalence of alloimmunization in major beta thalassemia in northern Iran (2010)

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## Abstract

**Background and Objective:** Repeated blood transfusion is the major treatment for patients with major thalassemia. However due to antigen encounters, it may initiate body reactions, including alloantibodies against red blood cell antigens. This study was done to determine the Prevalence of alloimmunization in major beta thalassemia patients in northern Iran.

**Method:** This descriptive - analytic study was carried out on 218 thalassemic patients (100 males and 118 females) with average age of  $22.5 \pm 7$  years in northern Iran during 2010. Each sample was tested for the presence of Alloantibodies including C, Cw, Lea, E, Lua, Leb, K, Jkb, N, P1, D, Jka, M, S, Xga, e, Fya, s, c, Fyb, k, Kpa, Jsb, Lub and Coa.

**Results:** Eighty eight cases (40.4%; 95% CI: 33.9-46.9) were positive for the presence of alloantibodies. Alloantibodies against C, Cw, Lea red blood cell surface antigens were the most prevalent (40%). No significant correlation was found between emergence of alloantibody with the age of initial, frequency and duration of blood transfusion.

**Conclusion:** Alloimmunization is a common observation in thalassemic patients and should be prevented by transfusing compatible blood.

**Keywords:** Beta thalassemia, Blood transfusion, Alloimmunization, Antibody

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