عنوان مقاله:

The Protective Effect of β-Thalassemia Trait Against Childhood Malignancies in an Unselected Iranian Population

محل انتشار:

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نویسندگان:

Mahdi Shahriari - *Division of Pediatric Hematology Oncology, Department of Pediatrics, Shiraz University of Medical Sciences, Shiraz, Iran*

Hamid-Reza Alidoost - *Division of Pediatric Hematology Oncology, Department of Pediatrics, Shiraz University of Medical Sciences, Shiraz, Iran*

خلاصه مقاله:

Background: β-thalassemia trait is one of the most common genetic disorders in Mediterranean countries. Previous studies have shown that β- thalassemia trait has a protective effect against malaria, coronary artery disease, hypertension and Alzheimer disease. We hypothesize that due to the shorter life span of red blood cells and increased hematopoiesis, these patients are at increased risk of developing hematological malignancies. Thus, this study investigated the possible effect of β-thalassemia trait on childhood malignancies.Methods: This was a case-control study that included ۴۳۲ children with malignancies (leukemias and lymphomas as well as solid tumors) as the case group and ۴۳۲ healthy individuals who referred for premarital β-thalassemia trait screening as the control group. All patients underwent a complete blood count as well as hemoglobin electrophoresis. Hemoglobin A۲≥۳.۵% or hemoglobin F between ۲% and ۱۰% were considered diagnostic for β- thalassemia trait. The results were compared between groups with the chi-squared test.Results: Mean age of the patients was ۷.۰۸ ± ۵.۱ years and mean age in the control group was ۲۵.۴۶ ± ۷.۳ years. There were ۲۵۳ (۵۸.۶%) boys and ۱۷۹ (۴۱.۴%) girls among the patients and ۳۰۸ (۷۱.۳%) men and ۱۲۴ (۲۸.۷%) women among the controls. The prevalence of β-thalassemia trait was ۵.۶% in the case group and ۱۱.۳% in the control group (P=۰.۰۰۱). The mean hemoglobin level was ۹.۸۱ ± ۳.۱ g/dL in those with malignancies and ۱۵.۳ ± ۱.۷ g/dL in healthy individuals (P<۰.۰۰۱).Conclusion: β-thalassemia trait is a protective factor against developing childhood malignancies in an unselected Iranian population. However, more studies are needed to clarify this issue.

کلمات کلیدی: