Frequency of β-thalassemia minor in Ardabil province in 2017-2018

Abstract:

Background and Objective*. Thalassemia is a genetic condition in which the patient's blood loses a large number of primary red blood cells and can not carry oxygen. Hemoglobin consists of two different chains called alpha and beta. The alpha chain is encoded by the 4 genes in chromosome number 16, and the disturbance in the alpha chain genes causes alpha thalassemia, but because there are 4 alpha genes, so the probability of defective four genes is rare at the same time, therefore, alpha thalassemia Its dangerous type is relatively rare. The other chain of hemoglobin is a beta chain and is encoded by two beta genes that are located on chromosome 11, which, if these genes are defective, cause the beta chain to be low or not at all, and it creates beta thalassemia. At present, the most effective way to prevent thalassemia is to screen for the disease at the population level and then to evaluate the molecularity of individuals. Considering the importance of β-thalassemia minor and its high prevalence in societies, as well as low studies in this regard, in Ardebil and our country We examined the prevalence of β-thalassemia minor and its prevention in Ardabil province during the period of 1939-97*

Methods*:. This descriptive cross-sectional study was conducted over six months in all of the province for a pre-marriege age of 1396-1396 and for β-thalassemia with ≥ 80, MCH <30 and HbA2> 3.5 In one person or both, they were referred to a blood and oncology specialist after being diagnosed with their β-thalassemia minor, β-thalassemia subjects were enrolled in a census. A questionnaire was prepared to collect the required information including CBC, HbA2, and place of residence information and the subjects completed the relevant questionnaires. After 6 months, the prevalence of β-thalassemia was determined among all the patients referred to the health centers of the province*

Result*:. Out of the 3962 people referring to the study, 2886 people (72.8%) were resident in Ardabil and 1076 people (27.2%)were resident in other cities. Out of 103 cases of thalassemia, 49 (47.5%) were women and 54 (52.4%) were men. 57 people (55.3%) resident in the provincial capital and 46 (44.6%) residents of the city of Ardebil province were diagnosed with thalassemia.*

Conclusion:. *The prevalence of β-thalassemia minor during this period was 5.35% in Ardebil, which was 4.06% in capital and 8.79% in other cities. The mean of HbA2 in males was 2.8 and 2.54 in wemen (p = 0.47). Therefore, there was no significant relationship between β-thalassemia prevalence for HbA2 and gender.*

Keywords*: Beta Thalassemia, Minor Thalassemia, Ardabil*