The Frequency of Adrenal Insufficiency in Adolescents and Young Adults with Thalassemia Major versus Thalassemia Intermedia in Iran.

Matin S1, Jahromi MG2, Karemizadeh Z3, Haghpanah S4, De Sanctis V5, Soliman A6, Dehbozorgian J4, Majd Z1, Rezaei N4, Karimi M4.

Abstract

BACKGROUND:
Endocrine dysfunction is not uncommon complication in patients with transfusion-dependent thalassemia and is thought to occur as a consequence of excessive iron overload. The primary objective of this study is to determine the frequency of adrenal insufficiency in patients with thalassemia major and thalassemia intermediate.

METHODS:
This cross-sectional study was done at the Shiraz University of Medical Sciences, Shiraz, Southern Iran, in 2013. One hundred and ninety patients were divided into two groups; thalassemia major(TM) and thalassemia intermediate (TI) groups. We measured 8 AM serum cortisol, ACTH and ferritin concentrations in all patients.

RESULTS:
The mean age of the TM and TI group were 22.5±5.7 and 23.8±6 years, respectively. 90 patients (47.4%) were splenectomized, 34 (36.2%) with TM and 56 (58.2%) with TI (p :<0.001). The median and interquartile range of serum ferritin levels were 2184±3700 ng/ml and 437±443ng/ml in TM and TI respectively (p< 0.001). Three patients with TM (1.6%) had low basal cortisol and ACTH levels. However, their cortisol response to standard - dose ACTH was normal in all patients with TM and TI