



Prevalence of Diabetes, Impaired Fasting Glucose and Impaired Glucose Tolerance in Patients with Thalassemia Major in Iran-A Meta-Analysis

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Background & Objective: This study aimed to investigate the prevalence of diabetes, Impaired Fasting Glucose (IFG) and Impaired Glucose Tolerance (IGT) in patients with Thalassemia major in Iran as a meta-analysis.

Materials & Methods: The present study has been conducted based on PRISMA checklist. To obtain corresponding Persian and English documentations, databases Magiran, Iranmedex, SID, Medlib, IranDoc, Scopus, PubMed, Science direct, Cochrane, Web of Science, Springer, Online Library Wiley as well as search engine Google Scholar were searched with no time limit to December 2015. Searching, study selection, quality evaluation and data extraction have been done by two researchers independently. All of the reviewed studies that had inclusion criterion were evaluated. Data manipulation and statistical analyses were performed with random effect model using Stata Ver.11.1.

Results: 32 studies were surveyed between 1991 and 2012 with a sample size of 4344 people. The average age of the patients was 16.83 years old. The prevalence of diabetes in patients with Thalassemia in Iran was estimated as 8.7% (CI: 95%, 6.8-10.5). The prevalence of IFG and IGT in patients with Thalassemia major in Iran were 12.9% (CI: 95%, 7-18.8) and 9.6% (CI: 95%, 6.6-12.5), respectively. No relationship between serum ferritin and development of Diabetes was noted.

Conclusion: Prevalence of diabetes, IFG and IGT in patients with Thalassemia major in Iran are high and requires new management strategies and policies to minimize endocrine disorders in Iranian patients with thalassemia major. It is recommended to screen patients for early diagnosis of disorders of endocrine glands, particularly diabetes, pre-diabetes and IGT.

Keywords: Diabetes, Impaired Fasting Glucose, Impaired Glucose Tolerance, Ferritin, Thalassemia major, Iran, Meta-analysis