

Effect of Iron overload on Glucose Regulation in Transfusion dependent Beta Thalassemia major Patients

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ABSTRACT Objective: To

evaluate the effect of iron overload on regulation glucose metabolism (diabetes and prediabetes) by using fasting blood glucose level and 2- hour postprandial plasma glucose level. **Methods:** This cross-sectional study was carried out at Jamila Sultana Thalassemia center for a period of 6 months. 54 (25 males and 29 females) patients of 12-26 years age, of Thalassemia major on regular blood transfusions and iron chelating therapy were included in the study. Demographic data was taken and standard Body Mass Index was measured for each patient. Fasting plasma glucose levels were checked following an overnight fast, after that each patient was given an oral glucose challenge of 1.75gm/kg body weight with a maximum dose of 75gm. Post-prandial plasma glucose levels were checked two hours after this oral glucose challenge. The data were entered on Statistical Package for the Social Scientists vr. 21 for analysis. Mean and standard deviation were calculated for all quantitative data, frequencies and percentages were calculated for qualitative data. **Results:** 13% of the patients had impaired fasting blood glucose, 5.6% patients had impaired 2-hour postprandial levels and 2 patients had their levels were in diabetic range. Patients' age and Body Mass Index showed a positive correlation with 2- hour postprandial glucose level with highly significant p- value (<0.001). **Conclusion:** The findings highlight the importance of regular follow-up of patients with ?-thalassemia major patients for early detection and management of associated complications.