

RELATIONSHIP BETWEEN BODY IRON PARAMETERS WITH HbA1c, PLAQUE FORMATION AND CAROTID ARTERY INTIMAL THICKENING IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

R. Ozcaglayan

Internal Medicine, Balikesir State Hospital, Turkey

Body iron deposits are associated with insulin resistance and those with high ferritin levels were reported to have a higher risk of developing type 2 diabetes mellitus than those with normal ferritin levels. In addition, there are publications on the reduction of iron deposits by iron chelation or phlebotomy in patients with type 2 diabetes mellitus with high ferritin levels, leading to improvement in insulin resistance and metabolic control. Relevant clinical verification is aimed at this topic. **METHODS:** We investigated whether there was a difference between body iron stores in patients with type 2 diabetes mellitus and healthy individuals, and the relationship between body iron deposits, HbA1c and carotid intimal thickening in type 2 diabetes. **OBJECTIVES:** Twenty complicated type 2 diabetes mellitus patients, 20 uncomplicated type 2 diabetes mellitus patients and 20 healthy persons were retrospectively screened for HbA1c, ferritin, iron, TIBC levels. **FINDINGS:** It was observed that iron deposits measured by serum ferritin correlated positively with HbA1c in all subjects. Serum ferritin levels were statistically higher in patients with complicated type 2 diabetes compared to those type 2 diabetes without complication and control group. Significant and positive correlation was found between ferritin values with HbA1c, plaque and intimal thickening. There was a significant and negative correlation between intimal thickening, plaque formation and HbA1c with TIBC. There was no statistical correlation between ferritin, serum iron and TIBC values with carotid intimal thickening and plaque formation in the diabetic patient group. Our findings support the association between ferritin-induced body iron stores and the pathogenesis of type 2 diabetes. **RESULT:** There is a significant increase in ferritin levels in complicated diabetic patients compared to uncomplicated diabetic patients and healthy individuals, and a higher risk of developing type 2 diabetes in healthy persons with high ferritin levels may be a better guide for follow-up and treatment regimens than for those with normal ferritin levels.