THE EFFECTS OF SHORT-TERM METFORMIN TREATMENT ON VITAMIN B12 LEVELS IN NEWLY DIAGNOSED TYPE 2 DIABETIC PATIENTS

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Introduction: It has been reported that type 2 diabetes may impair vitamin B12 metabolism through several mechanisms. This study aimed to evaluate the effects of short-term metformin treatment on vitamin B12 levels in newly diagnosed type 2 diabetic patients. Method/Design: This is an observational, prospective study of newly diagnosed type 2 diabetic patients on metformin treatment attending to the Endocrinology Outpatients Clinic. Forty-five newly diagnosed diabetic patients were included in the study. Of these, 8 were excluded from study due to lack of compliance. Fasting plasma glucose (FPG), post prandial plasma glucose (PPG), vitamin B12 levels and hematologic parameters including hemoglobin, hematocrit, mean corpuscular volume were measured before initiation and after 3 months metformin therapy period at the dose of 2 gr/day. Results: Three-months treatment with metformin reduced B12 levels (387.1±494.3 to 307.6±178.9.8 pg/ml respectively) in these patients. But this decrease was not statistically significant. There was no significant change in measured hematologic parameters after metformin treatment. Conclusions: Our results indicate that even the short-term metformin treatment tends to decrease vitamin B12 levels in patients with high-risk type 2 DM. It is advisable to measure serum vitamin B12 levels even after short-term metformin therapy in patients with high-risk