Serum taurine level in relation to ophthalmoscopic examination as early marker for diabetic retinopathy

Abstract

Aim: (Investigate the possibility of using serum taurine level (immune marker) in addition to ophthalmoscopic examination for all diabetic patients as pre-early marker for diagnosis and detection of most common eye complications of diabetes as diabetic retinopathy.

Patients and Methods: eighty diabetic patients presented with blurring in vision which is the main complain for all patients. They are chosen from (ophthalmology clinic) in the National Institute of Diabetes and Endocrinology after their approval. The age of patients in range between (18-60 years), Twenty healthy volunteers were enrolled as frank control. According to the image of ophthalmoscopic examination diagnosed, patients were classified into four grades (mild, moderate, sever non-proliferative and proliferative) of retinopathy. Complete clinical examination, investigation and biochemical analysis, measuring FBG, HbA1c, VEGF and taurine were measured for all included subjects.

Results: Non-significance change in LDL and triglycerides for all stages with respect to control group. HDL and cholesterol showed significant with frank group. Albumin and creatinine for some stages of retinopathy showed non significance changes with respect to control group. Urea recorded significant in all grades when comparing with control group, all included patients showed either micro or macroalbuminuria. AST and ALT showed highly significant in late stage comparing with frank group. Serum VEGF significant for all stages with frank group. Highly significant elevation in FBG and serum HbA1c was found parallel to the severity of disease. Compared to healthy group, a highly significant decrease in the level of serum taurine was recorded in all patients. Such decrease was correlated the grading of retinopathy ranging from mild non-proliferative to proliferative.

Conclusion: We advise measuring serum taurine level beside ophthalmoscopic examination as optical coherence tomography (OCT) regularly for all persons with diabetes as a pre early marker for detection and diagnose of more common eye disease result from diabetes as diabetic retinopathy.