

Abstract

Acta Ophthalmol. 2009 Aug;87(5):501-5.

Association between serum lipoprotein (a) level and progression of non-proliferative diabetic retinopathy in Type 2 diabetes.

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PURPOSE: To investigate independent risk factors related to the progression of non-proliferative diabetic retinopathy (NPDR) for Japanese Type 2 diabetic patients.

METHODS: One hundred and six patients with NPDR were followed up for 2 years. Diabetic retinopathy (DR) was determined by colour fundus photography. Multivariate logistic regression analysis was performed to assess variables independently associated with the progression of NPDR. Serum concentrations of novel risk factors for atherosclerotic vascular disease, including lipoprotein (a) [Lp(a)] and fibrinogen, were measured.

RESULTS: Thirty-three patients (31%) had progressed by two scale steps or more in 2 years. The progression of NPDR was significantly associated with HbA(1c) [odds ratio (OR) 2.12; 95% confidence interval (CI) 1.14-4.87], systolic blood pressure (OR 1.72; 95% CI 1.14-2.91), Lp(a) (OR 2.70; 95% CI 1.09-5.12) and fibrinogen (OR 1.68; 95% CI 1.03-3.08). Multivariate logistic regression analysis showed that HbA(1c) (OR 1.74; 95% CI 1.12-3.21) and Lp(a) level (OR 1.90; 95% CI 1.06-4.33) were significant and independent predictors of the progression of NPDR.

CONCLUSION: These data suggest that serum Lp(a) level is an independent risk factor for the progression of NPDR in Type 2 diabetes patients. We recommend that further prospective validation of our findings be undertaken to confirm these observations.

PMID: 18700887