[gw22-e0682]

## THE RELATIONSHIP OF URINE ALBUMIN CREATININE RATIO, SERUM INFLAMMATORY FACTORS AND DIABETIC RETINOPATHY

Chen Yanming[1], He Shengqing[1], Qian Xiaoxian[2] *[1]Department of Endocrinology, The Third Affiliated Hospital of Sun Yat-Sen University, Guangdong, China; [2]Department of Cardiology, The Third Affiliated Hospital of Sun Yat-Sen University, Guangdong, China*

10.1136/heartjnl-2011-300867.309

**Objective** To investigate the relationship of urine albumin creatinine ratio (UACR), serum inflammatory factors and diabetic retinopathy.

**Methods** One hundred and twenty five cases of type 2 diabetic patients age from 25 to 70 years old including 60 men and 65 women were recruited into this study. Another 47 normal glucose tolerance subjects were chosen as normal control group. They were divided into four groups after direct ophthalmoscope inspection and fundus fluorescein angiography

(FFA) examinations as follows: 47 cases of healthy normal control (NC), 50 cases of type 2 diabetes patients without retinopathy (T2DM), 41 cases of diabetes with non-proliferative retinopathy (NPDR) and other 34 cases of diabetes with proliferative retinopathy (PDR). The physical examination was performed for each patient. UACR, serum levels of alanine aminotransferase (ALT), γ-glutamyl transpeptidase (GGT), fasting plasma glucose (FPG), lipid profiles, glycation haemoglobin A1c (GHbA1c), creatinine (Cr), uric acid (UA), fasting insulin (FINS) were measured. Insulin resistance index (HOMA-IR) was calculated. Intercellular adhesion molecule-1 (ICAM-1), tumour necrosis factor-α (TNFα) and adiponectin were also detected.

**Results** There was no difference in UACR between T2DM without retinopathy patients and NC group, but ACR were higher in NPDR and PDR group than that of T2DM group ($p<0.05$). UACR was higher in PDR group than that of NPDR group ($p<0.05$). The serum levels of ICAM-1 and TNFα and HOMA-IR were significantly higher in the patients of T2DM, NPDR and PDR groups than that of NC group ($p<0.05$) and the serum levels of ICAM-1 and TNFα and HOMA-IR were higher in NPDR and PDR groups than that of T2DM group ($p<0.05$). The serum adiponectin concentration were lower in DM, NPDR and PDR group than that of NC group ($p<0.05$), but the serum adiponectin concentration was lower in NPDR and PDR group than that of T2DM group ($p<0.05$). UACR, ICAM-1, TNFα and diabetes duration were risk factors for DR in multivariate logistic regression analyses. Moreover, UACR was the independent risk factor for DR when adjusted for age and duration.

**Conclusion** The results suggested that UACR, serum inflammatory factors such as ICAM-1, TNFα, adiponectin played important roles in the pathogenesis of diabetic retinopathy. UACR may be a clinical predictor and an important follow-up observation factor for DR.