

Elevated serum c-reactive protein level and microalbuminuria in patients with type 2 diabetes mellitus

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Abstract

Introduction. Microalbuminuria is a marker of vascular endothelial damage. In addition, it is reported that high serum levels of C-reactive protein (CRP) is a novel cardiovascular risk factor that impairs endothelial function. The aim of this study was to evaluate the relationship between microalbuminuria and elevated serum level of high-sensitivity CRP (HS-CRP) in type 2 diabetic patients. **Materials and Methods.** We measured serum levels of HS-CRP in 88 patients with type 2 diabetes mellitus. They were divided into a microalbuminuric group (n = 40) and those with a 24-hour urine albumin less than 30 mg/d (n = 48). The relationship of serum HS-CRP level with albuminuria and other characteristics of the patients was assessed. **Results.** Patients with microalbuminuria were significantly older and affected by diabetes mellitus longer than those without microalbuminuria. Also, their mean HS-CRP was significantly higher (4.98 ± 1.40 mg/L versus 2.82 ± 2.10 mg/L; $P < .001$). The Pearson correlation test showed a significant correlation between HS-CRP level and urine albumin level ($r = 0.42$; $P < .001$). The specificity and sensitivity of HS-CRP for detection of microalbuminuria in were 78.0% and 78.8%, respectively, and the positive and negative predictive values were 77.0% and 70.2%, respectively. **Conclusions.** In type 2 diabetic patients, microalbuminuria is accompanied by elevated HS-CRP, suggesting activation of inflammatory pathways in progression of renal and cardiovascular atherosclerotic disease. As an easier and cheaper test for assessment of diabetic nephropathy, we recommend further studies on HS-CRP in diabetic patients.

Author keywords

Albuminuria; C-reactive protein; Diabetic nephropathies; Type 2 diabetes mellitus

Indexed Keywords

EMTREE drug terms: C reactive protein

EMTREE medical terms: adult; aged; article; atherosclerotic cardiovascular disease; controlled study; diabetic nephropathy; disease association; disease course; disease duration; human; inflammation; major clinical study; microalbuminuria; non insulin dependent diabetes mellitus; protein analysis; protein blood level; sensitivity and specificity; urine level

MeSH: Adult; Age Factors; Aged; Albuminuria; Biological Markers; C-Reactive Protein; Cross-Sectional Studies; Diabetes Mellitus, Type 2; Female; Humans; Male; Middle Aged

Medline is the source for the MeSH terms of this document.

Chemicals and CAS Registry Numbers: C reactive protein, 9007-41-4; Biological Markers; C-Reactive Protein, 9007-41-4

ISSN: 1735-8082 **Source Type:** Journal **Original language:** English

PubMed ID: 19377203 **Document Type:** Article