Significance of cystatin c combing with retinol binding protein in diagnosis of early renal injury of diabetes patients

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To investigate the value of combined detection of cystatin c (Cyc-C) and retinol binding protein (RBP) in diagnosis of early renal injury of diabetes patients. Methods: A total of 170 patients with diabetes mellitus and 75 healthy controls were enrolled in this study. The blood and urine samples were collected and immunoturbidimetric assays were used to detect serum Cyc-C and urinary RBP. Results: The serum level of Cyc-C and urinary RBP were both significantly higher in diabetes patients (all P<0.01), comparing to healthy controls. What’s more, serum Cyc-C and RBP were both significantly higher in patients with diabetic nephropathy than patients with simple diabetes (all P<0.01). The positive rates of Cyc-C and RBP in patients with simple diabetes were 21.79% and 32.05%, respectively; while the positive rate of combined detection was 46.15%. The positive rates of Cyc-C and RBP in patients with diabetic nephropathy were 89.13% and 91.30%, respectively; while the positive rate of combined detection was 97.83%. Conclusions: Serum Cyc-C and urinary RBP are sensitive markers for early renal injury of diabetes patients, and combined detection of these two markers can significantly up-regulate the positive rate of detection of early renal injury in diabetes patients.

[KEY WORDS] Cystatin c; Retinol binding protein; Diabetes; Diabetic nephropathy; Early renal injury