
**Objective**

To assess the accuracy of urinary albumin concentration (UAC) and urinary albumin-to-creatinine ratio (UACR) in a random urine sample (RUS) as a screening test for microalbuminuria and macroalbuminuria in patients with non-insulin-dependent diabetes mellitus (NIDDM).

**Design**

Comparison of UAC and UACR with 24-hour urinary albumin excretion rate (UAER) using receiver-operating characteristics (ROC) curves.

**Setting**

Diabetes clinic in a tertiary care center in Brazil.

**Patients**

93 patients (mean age 61 y, 52% women) who had NIDDM (mean duration 11 y). Exclusion criteria were cardiac failure or renal tract disease other than diabetic nephropathy.

**Main results**

The areas under the curve for microalbuminuria were 0.98 for UAC and 0.97 for UACR; for macroalbuminuria the areas were 0.99 for UAC and 0.96 for UACR. The UAC and UACR areas for microalbuminuria and macroalbuminuria did not differ (P > 0.05). A UAC value of 16.9 mg/L and a UACR value of 15.0 mg/g were 100% sensitive for microalbuminuria; for macroalbuminuria a UAC value of 174.0 mg/L and a UACR value of 116.0 mg/g were 100% sensitive. Greater than 88% sensitivity and specificity for microalbuminuria were achieved with UAC and UACR values of 33.6 mg/L and 26.8 mg/g, respectively; greater than 90% sensitivity and specificity for macroalbuminuria were achieved with UAC and UACR values of 296.2 mg/L, and 334.3 mg/g, respectively.

**Conclusion**

Measures of urinary albumin concentration and urinary albumin-to-creatinine ratio in a random urine sample were sound screening tests for microalbuminuria and macroalbuminuria in patients with non-insulin-dependent diabetes mellitus.

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