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### Prevalence and Factors Associated with Microalbuminuria and Abnormal Renal Function in Thai Obese Adults

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#### Abstract

**Objective:** To determine the prevalence and factors associated with microalbuminuria and abnormal renal function in Thai obese adults.

**Material and Method:** A cross-sectional study data was collected from 86 patients during October 2010 to February 2011 at the obesity clinic and outpatient department of Siriraj Hospital. Obese patients with body mass index > 25 kg/m<sup>2</sup> participated in the present study. Exclusion criteria were the patients who refused participation or patients with end stage renal disease who were under treatment with hemodialysis or continuous ambulatory peritoneal dialysis. A questionnaire was used for collecting information on demographic data, e.g., age, sex, residence, educational level, underlying diseases and drugs use, family history of obesity, family history of renal disease, smoking, or alcohol drinking; height, weight, body mass index, waist circumference, blood pressure, blood chemistry test and urine analysis were collected. The abnormal function of the kidney was assessed by presence of microalbuminuria or estimated glomerular filtration rate below 90 mL/min/1.73 m<sup>2</sup>.

**Results:** The prevalence of microalbuminuria in obese patients was 28% and prevalence of chronic kidney disease stage 2 or more was 22%. Factors associated with microalbuminuria were FBS > 126 mg/dL (OR = 6.2, 95% CI: 1.7-22.1), hyperuricemia (serum uric acid > 7 mg/dL)(OR = 3.2, 95% CI: 1.0-9.8). Factors associated with chronic kidney disease stage 2 or more were age > 55 years (OR = 7.8, 95% CI: 2.5-24.1), Angiotensin II receptor blocker (ARB) use (OR = 4.1, 95% CI: 1.3-12.3) and hyperuricemia (serum uric acid > 7 mg/dL)(OR = 4.5, 95% CI: 1.5-13.5).

**Conclusion:** Early identification of obesity and metabolic syndrome and modifying pattern of life style behavior in obese adults carrying risk factors might be beneficial in preventing and delaying the progression of chronic kidney disease in Thailand.

**Keywords:** Obesity, Microalbuminuria, Chronic kidney disease

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