中文題目：中廣型肥胖比身體質量指數更能預測 3-5 期慢性腎臟病病人的死亡

英文題目：Central Obesity is Better Than Body Mass Index in Predicting Mortality in Chronic Kidney Disease Stage 3-5 Patients

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Background: High body mass index (BMI) is associated with increased mortality in general population.[1] However, the relationship between high BMI and increased mortality is not observed in dialysis and advanced chronic kidney disease (CKD) patients, which is called as "reverse epidemiology".[2] Hypotheses are raised and one of them is that central obesity is a better predictor for mortality. Central obesity can be measured by waist circumstance, waist-to-height ratio or waist-to-hip ratio (WHR) and is a predominant risk factor for metabolic syndrome and a predictor for cardiovascular disease.[6] In this study, we would like to find out the impact of WHR on mortality in CKD stage 3-5 patients in presence of reverse epidemiology.

Methods: In total of 3262 patients with CKD stage 3-5 were enrolled in the Integrated CKD Care Program Kaohsiung for Delaying Dialysis in Kaohsiung Medical University Hospital from November 11, 2002 to May 31, 2009 and followed-up until December 31, 2014. The demographic features were recorded at the first visit, and the medical history was recorded using a chart review. The model was adjusted for age, gender, estimated glomerular filtration rate, log-transformed urine protein and creatinine ratio, diabetes, cardiovascular disease, smoker, cancer, severe liver disease, hypertension, hemoglobin, body mass index, log-transformed cholesterol, glycosylated hemoglobin, albumin, log-transformed C-reactive protein and phosphorus.

Results: In Cox regression by BMI, hazard ratio (HR) for mortality showed significantly increased risks in BMI 15.0-20.0 kg/m^2 (2.59 in male and 1.69 in female) and 20.1 -22.5 kg/m^2 (1.52 in male and 1.82 in female) in the fully adjusted model. In Cox regression by WHR, HR for mortality showed significantly increased risk in WHR category Q4 (1.40 in male and 1.63 in female) and Q5 (1.39 in male and 1.42 in female) patients. We also discovered a significant increase in mortality in WHR category Q1 in male.

Conclusion: We demonstrated that high WHR is associated with mortality in advance CKD patients, while high BMI is not associated with mortality in female.

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