中文題目：社區世代研究探討血清高濃度瘦體素預測慢性腎臟病的角色
英文題目：High Serum leptin levels predicted progression of CKD: A 3-year prospective community-based study
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Background: Along with the trend of population aging, the Chronic Kidney Disease (CKD) becomes more and more common and causes a burden to our public health system. Obesity has been reported the detrimental effects to our health, and several adipokines were proposed to implicate in the CKD. However, it's still unclear how these adipokines exactly work on development of the CKD. In this study, we investigated whether the serum leptin can be the predictor for the development of the CKD.

Methods: In this prospective community-based study, we followed up renal function change of 1762 habitants of communities of Northern Taiwan for 3 years. We measured the traditional CKD risk factors, metabolic profile and serum leptin levels. Serum leptin levels were stratified by tertile group. Cox proportional regression analysis was applied to estimate risk of renal progression of community habitants associated with serum leptin levels.

Results: The mean age was 57.0 ± 11.10 years, mean eGFR was 96.6 ± 25 mL/min/1.73 m^2 and 30.7% were men. Diabetes was present in 20.6% of all participants. The prevalence of CKD was 32%. Tertile of leptin levels ranged from : 1st tertile (< 8.3, n=590), 2rd tertile (8.31-15.6, n=587) and 3rd tertile (> 15.61, n=585). Cox proportional regression analysis revealed increased hazards ratio with high log leptin levels (HR : 1.106, 95% CI: 1.020-1.198, p=0.014). The increased risk remained significant in patients with higher tertile of serum leptin [1st tertile: reference; 2nd tertile: HR(1.281), 95% CI (1.083-1.516), p(0.004) ; 3rd tertile: HR(1.158), 95% CI (0.976-1.375), p(0.092)]. High serum leptin levels remained an independent predictor (HR: 1.272, 95% CI: 1.042-1.552), p=0.018) for renal progression after adjustment of comorbidities, such as diabetes mellitus, hypertension, metabolic syndrome, obesity.

Conclusions: High serum leptin levels may be the predictor for the renal progression and help us to give earlier intervention to prevent the development of the CKD. Further study should be needed to clarify the exact role of this finding and to apply this possible predictor to the therapeutic intervention in the future.

Keywords: Chronic Kidney Disease, community, leptin, metabolic syndrome, obesity.