中文題目: 急性腎損傷與骨折風險的關係

英文題目: The association between acute kidney injury and long-term effects on bone disorders

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Introduction: Acute kidney injury (AKI) has a negative impact on long‐term renal function and prognosis. However, the association between acute renal dysfunction and long‐term effects on bone disorders has not yet been characterized.

Methods: Using a population‐based cohort study, we aimed to evaluate associations between AKI and long‐term effects on bone fractures. We identified relevant data of all hospitalized patients aged >18 years with histories of dialysis‐requiring AKI, with subsequent recovery and discharge, from the claim records of the Taiwan National Health Insurance database between 2000 and 2008. We determined long‐term de novo bone fracture and all‐cause mortality after patients' index‐hospitalization discharge using propensity score–adjusted Cox proportional hazard model. Varying‐ time models were used to adjust for long‐term effects of end‐stage renal disease (ESRD) on main outcomes. Among 448 AKI patients who had dialysis and survived 90 days after index‐hospitalization discharge without reentering dialysis, 273 were male (60.9%) with a mean age of 61.4 ` 16.6 years. Controls included 1792 hospitalized patients without AKI, dialysis, or bone fracture history. In the AKI recovery group, bone fracture incidence was 320 per 10,000 person‐years and hazard ratio (HR) of long‐term bone fracture was 1.25 (p 1⁄4 0.049) compared with the control group, independent of subsequent ESRD status (HR 1⁄4 1.55; p 1⁄4 0.01). Both AKI recovery status (HR1⁄42.31; p<0.001) and time varying factor of bone fracture (HR1⁄41.43; p<0.001) were independent predictors of mortality compared with controls.

Conclusion: AKI requiring temporary dialysis independently increases long‐term risk of bone fracture, regardless of subsequent progression to ESRD. Long‐term bone fractures may negatively impact patient mortality.