

中文題目：末期腎衰竭病人在血液透析治療後有較低的風險發生肌肉痠痛—頻率配對回溯性世代研究

英文題目：Lower risk of musculoskeletal pain among patients with end-stage renal disease treated by hemodialysis: A frequency-matched retrospective cohort study

作者：王捷賢<sup>1</sup>，蔣仁槐<sup>2</sup>，許恆榮<sup>3</sup>

服務單位：<sup>1</sup>中國醫藥大學附設醫院腎臟內科，<sup>2</sup>中國醫藥大學健康資料管理辦公室，<sup>3</sup>基隆長庚醫院腎臟內科

**Background:** Musculoskeletal pain is experienced by 5%–14% of the general adult population, and it is highly common among patients with chronic kidney disease. However, there is no study concerning about the prevalence and incidence of musculoskeletal pain among patients with end-stage renal disease (ESRD) treated by hemodialysis. Therefore, the purpose of the study was to analyze this relationship between musculoskeletal pain and ESRD using clinical features and determinants.

**Methods:** A total of 93,013 patients who received ESRD diagnoses during 2000–2010 and were followed up until December 31, 2011, were identified from the Longitudinal Health Insurance Database 2000 of the National Health Research Institutes; non-ESRD controls were also selected from the Longitudinal Health Insurance Database 2000. Sociodemographic factors investigated included age and sex. The age of the patients was classified into the following three age groups: 18–39, 40–64, and  $\geq 65$  years. Comorbidities were certified by using the ICD-9-CM codes in outpatient, inpatient, and catastrophic illness registry files. The competing risk model was considered in this analysis of chronic musculoskeletal pain and death. Hazard ratios (HRs), subhazard ratios (SHRs) and 95% confidence intervals (95% CIs) were estimated for each variable by using Cox proportional hazard regression

**Results:** The results indicated that the risk of chronic musculoskeletal pain is significantly lower in the hemodialysis treated ESRD cohort (subhazard ratio = 0.52,  $P < 0.0001$ ), despite of sex, age, or comorbidities. Older patients were discovered to be at lower risk of chronic musculoskeletal pain (subhazard ratio = 0.94,  $P = 0.0765$ ), with those aged 40 to 64 years having the highest hazard ratios (subhazard ratio = 1.21,  $P < 0.0001$ ), and the prevalence of chronic musculoskeletal pain in women was higher than that in men (vs female sex; subhazard ratio = 0.69,  $P < 0.0001$ ). Kaplan–Meier analysis revealed a lower cumulative incidence of myalgia development in the ESRD cohort compared with the non-ESRD cohort (log-rank test,  $P < 0.001$ ).

**Conclusions:** The findings of the current study suggest that the prevalence of musculoskeletal pain is significantly lower in patients with ESRD than in those without ESRD. Clinicians should assess the risk of chronic musculoskeletal pain in such patients and provide appropriate and timely support of treatment.