

# 在透析病人，不同的透析模式是髖部骨折的預測因子

## Dialysis Modality as a Predictor for Hip Fracture among Dialysis Patients

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**Background:** Chronic kidney disease increases the risk for hip fractures. Hip fractures are associated with increased mortality, decreased quality of life, and higher economic burden. To determine whether dialysis modality is associated with a higher incidence of hip fractures in end-stage renal disease (ESRD) dialysis patients.

**Materials and Methods:** We examined adult ESRD patients who initiated dialysis between 1999 and 2005. Patients were followed from start dialysis to hip fracture, death, transplant, dialysis withdrawal, or 31 December 2008. The incidence of newly diagnosed hip fracture was expressed as the number of case of hip fracture per 10,000 person-years. The cumulative incidence rate of hip fracture was calculated using Kaplan-Meier methods. Cox proportional hazards models were used to identify the risk factors of hip fracture. Hazard ratios (HRs) and 95% confidence intervals (CIs) were derived from Cox proportional hazards models. To adjust for potential confounding in the relationship between comorbidities, multivariate analyses were used. Significance was set at  $p < 0.05$ .

**Results:** A total 51,473 dialysis patients were examined in this study. During the study period, 1903 patients had hip fracture. The overall incidence rate of hip fracture was 89.21 per 10,000 patient-years. Patients' age was  $67.91 \pm 10.45$  and  $59.27 \pm 14.08$ , and they included 60.6% and 51.8% women in patients with and without hip fracture, respectively. Female gender, old age, receiving hemodialysis, a prior history of hip fracture and having baseline comorbidities were risk factors for hip fracture in the dialysis patients. Patients on hemodialysis had a 31% higher incidence of hip fracture than those on peritoneal dialysis (HR 1.31, 95% CI: 1.01-1.70). Patients  $\geq 65$  years had a more than 13-fold increased risk of hip fracture compared to those aged 18-44 years old (HR 13.65, 95% CI: 10.12-18.40). The overall in-hospital mortality rate was 3.2%. The cumulative survival rates after a hip fracture were 74.6% at one year and only 29.6 % at seven years.

**Conclusion:** Our findings supported that the incidence rate of hip fracture in ESRD patients was high. In addition, in-hospital and long-term mortality rate was high among ESRD patients. Besides well-known risk factors, receiving hemodialysis was independently associated with hip fracture.