

中文題目:低血糖增加末期腎衰竭透析患者急性冠心症風險:台灣世代研究
英文題目:Hypoglycemia increase the risk of acute coronary syndrome in end stage renal disease dialysis patients: Taiwan national cohort study
作者:朱柳雯¹ 簡志強¹ 鄭高珍¹ 王志中²
服務單位:永康奇美醫院內科¹ 永康奇美醫院醫學研究部²

Abstract

Background: The relationship between hypoglycemia and cardiovascular events in the diabetic end stage renal disease (ESRD) dialysis patients remains unclear. The aim of this study was to investigate whether hypoglycemia in pre-ESRD stage increase the risk of subsequent acute coronary syndrome (ACS) after the initiation of dialysis.

Methods: This longitudinal cohort study examined the medical claims in the Taiwan National Health Insurance Research Database of diabetic ESRD patients who initiated dialysis between 2002 and 2006. Hypoglycemia was identified from the 3 years period before the first dialysis. The patients were followed until death, end of dialysis, or 31 December 2008. First episode of ACS after the initiation of dialysis was collected from the inpatient claims. The cumulative incidence rate of ACS was calculated using Kaplan-Meier methods. Cox proportional hazards models were used to identify the risk factors for ACS.

Results: We enrolled 21,000 adult incident diabetic ESRD dialysis patients. 4,493 patients (21.40%) had hypoglycemia during the 3-year pre-dialysis period. The patients with hypoglycemia were older and had more comorbidities than those without hypoglycemia. The cumulative incidence rate of ACS for patients with and without hypoglycemia were 4.4% vs. 3.9% at one year, 12.3% vs. 10.3% at three years, and 21.3% vs. 16.0% at five years, respectively. After multivariate adjustment, patients with hypoglycemia episode had a 17% higher risk of ACS (HR: 1.17, 95% CI: 1.06-1.28).

Conclusion: Hypoglycemia in diabetic ESRD patients increased risk of ACS after dialysis. Glycemic management to avoid hypoglycemia is important in diabetic ESRD patients, especially those with comorbidities. Further studies need to investigate the mechanism between hypoglycemia and ACS in diabetic ESRD patients.