



STATIN USE ASSOCIATED WITH A LOWER RISK OF LOWER EXTREMITY AMPUTATION AND ALL-CAUSE MORTALITY IN PATIENTS WITH DIABETES MELLITUS

Poster Contributions

Poster Hall B1

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Background: Statins have been widely prescribed for hyperlipidemia treatment, and have benefits for primary and secondary prevention of cardiovascular diseases. However, the effect of statin use to future lower extremity amputation especially for diabetic patients remained undetermined.

Methods: We conducted a cohort study using data from the Taiwan National Health Insurance Research Database. Patients with diabetes mellitus were identified using coding of International Statistical Classification of Disease and Related Health Problems. Cox regressions were performed to determine the hazard ratio (HR) of lower extremity amputation in the diabetic patients taking statins (statin cohort) compared with a propensity-matched comparison cohort (without statin).

Results: A total of 40,136 patients with diabetes were enrolled in our cohort study and 20,922 have received statin treatment. During a mean 5.2 years of follow-up, statin cohort had significantly lowered risk of low extremity amputation rate (0.6% vs. 1.1%, log-rank $p < 0.001$) as well as all cause mortality (3.1% vs. 9.2%, $p < 0.001$) than comparison cohort. After Cox regression analysis, statin use was independently associated lower risk of lower extremity amputation among diabetic patients [hazard ratio(HR) 0.498, 95% confidence interval(CI): 0.40-0.62, $p < 0.001$]. In addition, the benefit of statin to a reduced risk of lower extremity amputation remained consistent among those with only metformin treatment(HR 0.35, 95% CI 0.20-0.62), metformin plus oral anti-diabetic drug(HR 0.55, 95% CI 0.42-0.72) and insulin therapy(HR 0.46, 95% CI 0.29-0.73), indicating that statin can reduce extremity amputation rate in diabetic patients no matter the severity of diabetes.

Conclusion: Statin use was associated with a lower risk of lower extremity amputation and all-cause mortality in patients with diabetes mellitus.