中文題目：乙型交感神經抑制劑(beta-blockers)對第二型糖尿病合併周邊血管病變患者的下肢截肢風險的相關性分析

英文題目：The Association between Beta-blocker therapy and future risk of lower limb amputation in patients with diabetes and peripheral artery disease

作　　者：徐千彝[1]，陳永泰[2]，蘇郁文[3]，黃柏勳[4]

服務單位：[1]台北醫學大學附設醫院心臟內科; [2]台北市立聯合醫院和平院區醫院腎臟科; [3]台北榮民總醫院內分泌暨新陳代謝科; [4]台北榮民總醫院心臟內科

Background: Theoretically, beta-adrenoceptor blocking agents (beta-blockers) may reduce peripheral perfusion via α-receptor-mediated peripheral vasoconstriction. The use of beta-blockers in patients with PAD is therefore controversial. According to the European society of cardiology (ESC) guideline for PAD in 2011, beta-blockers are not contraindicated. However, there is few evidence regarding the safety of beta-blocking agents use in DM patients with PAD.

Methods: We conducted a retrospective registry analysis with Taiwan's National Health Insurance Research Database (NHIRD) to analyze the impact of beta-blockers use on limb outcome in patients with type 2 diabetes mellitus and PAD. A total of 20,125 propensity score-matched pairs of beta-blocker users and nonusers with type 2 diabetes mellitus and established diagnosis of PAD were examined for the period 2009 to 2011.

Results: The mean age of the study subjects was 64.4 ± 11.7 years in beta-blocker user and 64.5± 11.6 years in non-user. During the mean follow-up of 15 months, a total of 365 beta-blocker users and 434 non-users were amputated. Compared with nonusers, beta-blocker users were associated with a lower risk of amputation for PAD (hazard ratio 0.83; 95% confidence interval, 0.72-0.96). Additionally, beta-blocker users had a decreased risk of all-cause mortality than nonusers (hazard ratio 0.94; 95% confidence interval, 0.91-0.98). In comparison, risks of in-hospital cardiovascular death, myocardial infarction, and ischemic stroke were not significantly different between users and non-users.

Conclusions: This large-scale nationwide population-based cohort study demonstrated that treatment with beta-blockers is associated with lower risk of all-cause mortality and amputation in type 2 DM patients with PAD.