

中文題目：糖化血色素的變化與重大肢體不良事件的長期風險探討

英文題目：Initial visit-to-visit glycated hemoglobin A1c variations and long-term risk of major adverse limb events

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Background Major adverse limb events (MALEs) are associated with higher risks of subsequent death or amputation. Identify novel risk factor is important to understand the pathophysiology and to provide chance to reduce the occurrence.

Objective To evaluate the association between glycated hemoglobin A1c (HbA1c) variation and long-term risk of MALEs.

Methods Patients with at least one HbA1c measurement in each of the 4 run-in years after the first diagnoses of type 2 diabetes were retrospectively identified from a multi-center database. Patients with established lower extremity arterial disease were excluded. Participants were followed from the end of run-in period until death, the latest visit date, or the end of the study period. Outcomes investigated were MALEs (revascularization, foot ulcers, and lower limb amputations) and mortality. The association between HbA1c variations and outcomes was evaluated using Cox proportional hazard model, and adjusted for mean HbA1c and baseline characteristics.

Results

56,872 patients were identified. The average number of HbA1c measurements during the 4 run-in years was 12.6. The average follow-up time was 6.1 years. The cumulative incidence of MALEs was 9.25 per 1000 person-years. Visit-to-visit HbA1c variations were significantly associated with MALEs and mortality after multivariate adjustment. Persons in the highest quartile of variations had increased risks for MALEs (HR 1.25, 95% CI 1.10-1.41), lower limb amputation (HR 3.05, 95% CI 1.97-4.74), and mortality (HR 1.81, 95% CI 1.63-2.02).

Conclusions HbA1c variation was independently associated with a long-term risk of MALEs, lower limb amputations, and mortality in patients with type 2 diabetes.