

中文題目：年度糖化血色素 A1c 的平均值和變異性與周邊動脈疾病相關

英文題目：Mean and variability of the annual hemoglobin A1c are associated with high-risk peripheral artery disease

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**Background:** Glucose variability is predictive of cardiovascular events and all-cause mortality.

However, the association between peripheral artery disease (PAD) and glucose variability has not been thoroughly investigated. We assessed the standard deviation (SD) of the annual hemoglobin A1c (HbA1c) in type 2 diabetic patients with low-risk and high-risk PAD.

**Methods:** A total of 4144 patients underwent an evaluation of the ankle-brachial index (ABI) and the percentage of the mean arterial pressure (%MAP) at the ankle. We retrospectively collected the first HbA1c record from each year until the ABI measurement.

**Results:** The SD of the annual HbA1c was higher in the patients with an ABI  $\leq 0.90$  than in those with an ABI  $> 0.90$  ( $1.1 \pm 0.9$  vs.  $1.0 \pm 0.8\%$ ,  $P=0.009$ ) and was higher in the patients with a %MAP  $\geq 45\%$  than in those with a %MAP  $< 45\%$  ( $1.1 \pm 0.8$  vs.  $1.0 \pm 0.8\%$ ,  $P=0.007$ ). A high SD and mean of the annual HbA1c is associated with high-risk PAD, which is defined as a combination of an ABI  $\leq 0.90$ , a %MAP  $\geq 45\%$ , or both (odds ratio=1.371, 95% CI: 1.112–1.690,  $P=0.003$ ).

**Conclusions:** The fluctuation of the HbA1c value is a high risk for PAD in patients with type 2 diabetes and poor glucose control.