

# **Relationship Between Zolpidem Use and Acute Myocardial Infarction**

## **Risk: A Taiwanese Population–Based Case-Control Study**

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## ABSTRACT

**Purpose:** To evaluate the relationship between the use of zolpidem and the risk of subsequent acute myocardial infarction (AMI) in Taiwanese patients.

**Methods:** This case-control study used data obtained from the National Health Insurance Research Database to determine whether the use of zolpidem is associated with an increased risk for AMI. The case group comprised 5048 patients who were newly diagnosed with AMI between January 1, 2005, and December 31, 2010. As the control group, we randomly selected a 4-fold higher number of patients without AMI. Patients were frequency-matched with controls based on sex, age, and year of index date. We measured the effect of zolpidem and determined the adjusted odds ratios (ORs) with 95% confidence intervals (CIs).

**Results:** We found that exposure to zolpidem was associated with an increased risk for AMI (OR = 1.34; 95% CI, 1.25–1.45). The risk of AMI increased significantly with increasing exposure to zolpidem; for average exposures of  $\leq 35$ , 35–134, 134–587, and  $> 587$  mg/year, the ORs were 1.23, 1.27, 1.39, and 1.51, respectively (P value for trend  $< 0.0001$ ). The risk of AMI increased greatly with zolpidem exposure, regardless of whether people presented with a sleep disorder; the adjusted OR was 1.35 for those without sleep disorder and 1.33 for those with sleep disorder.

**Conclusions:** This population-based study showed a positive association between the use of zolpidem and an increased risk for AMI. Our findings warrant further large-scale and in-depth investigations in this area.

