**ANTIDEPRESSANT USE, SEROTONIN TRANSPORTER AFFINITY, AND REINFARCTION AMONG PATIENTS RECEIVING CLOPIDOGREL:**

**A POPULATION-BASED STUDY**

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Background: Previous research suggests that use of serotonergic antidepressants following myocardial infarction is associated with reduced platelet aggregation and a lower risk of adverse cardiovascular events. Whether these benefits extend to patients already taking clopidogrel is unknown.

Methods: We conducted a population-based nested case–control study among patients aged 66 years or older who commenced clopidogrel between April 1, 2002 and December 31, 2009, following hospital discharge for acute myocardial infarction (AMI). Cases were those who were readmitted for AMI, underwent percutaneous coronary intervention (PCI) or died within 90 days of discharge. Three controls were matched to each case on age, PCI and the date of hospital discharge. We categorized exposure to antidepressants as current or no use within 120 days before the index date, and the serotonergic activity of antidepressants was further categorized as low, medium, and high according to their affinity for the serotonin transporter.

Results: Among 24,090 patients who received clopidogrel following AMI, we identified 2494 cases. Of these, 2444 (98%) were successfully matched to 7045 controls. After extensive multivariable adjustment, antidepressant use was not associated with lower risk of the composite outcome (adjusted odds ratio [OR] 1.11 and 95% confidence interval [CI] 0.98-1.27). The absence of association was consistent across the different antidepressant groups categorized by serotonin transporter affinity.

Conclusion: In high risk cardiovascular patients with a history of AMI and treated with clopidogrel, antidepressant use is associated with no additional reduction in risk of reinfarction irrespective of serotonin transporter affinity.