**Proton pump inhibitors in patients with atrial fibrillation or atrial flutter receiving combination anticoagulant and antiplatelet therapy undergoing percutaneous coronary intervention**

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**Background:** The treatment strategies for patients with atrial fibrillation (A.fib) or atrial flutter (A.flutter) who undergo percutaneous coronary intervention (PCI) must balance the risk of stent thrombosis and ischemic stroke with bleeding risks. Current guideline recommendations support the use of triple antithrombotic therapy (TAT), consisting of an oral anticoagulant, P2Y12 inhibitor, and aspirin, in patients with high ischemic risk.1-2 However, several studies have shown that dual antithrombotic therapy (DAT), consisting of an oral anticoagulant and a P2Y12 inhibitor, has been associated with significantly less bleeding than TAT.3 Post-discharge bleeding–related hospitalization after PCI was statistically significantly associated with subsequent death and myocardial infarction (MI), with a majority being gastrointestinal bleeds (GIB).4 The use of proton pump inhibitor (PPI) therapy as prophylaxis against GIB in all patients receiving the combination of antiplatelet and anticoagulant therapy is recommended in current guidelines.1-2 However, there have been no studies that have investigated the use of PPIs specifically in the A.fib or A.flutter population who have undergone PCI.

**Objective:** The primary objective of this study was to investigate whether PPIs reduce bleeding rates in patients with A.fib or A.flutter receiving the combination of an anticoagulant and antiplatelet therapy in the setting of recent PCI. The primary endpoint was clinically significant bleeding defined as the composite of major and minor bleeding according to TIMI bleeding criteria. The secondary endpoints were the incidence of major bleeding, minor bleeding, and major adverse cardiovascular events (death, myocardial infarction, and target vessel revascularization).

**Methods:** This was a retrospective, cohort study that evaluated UNC REX Healthcare patients between January 1, 2014 and September 30, 2020. Patients were included if they were 18 years of age, had a history of A.Fib or A.flutter and long term use of an anticoagulant, had received PCI during index hospitalization, and had utilized a P2Y12 inhibitor for at least 6 months after PCI. Patients were excluded if they had a contraindication to PPI therapy, were using anticoagulation for indications other A.fib or A.flutter, had an active GIB during index hospitalization, had recent or planned coronary-artery bypass graft (CABG) surgery, were on H2-receptor antagonist (H2RA) therapy, had either P2Y12 inhibitor or anticoagulation less than 6 months, had documented non-compliance, were incarcerated, or if they were pregnant.

**Results:** Among 65 patients included in the study, 44 patients were in the no PPI group and 21 patients were in the PPI group. When comparing the composite of major and minor bleeding between the no PPI group (14%) and the PPI group (14%), the findings are considered not statistically significant (p = 1.000). In a subgroup analysis, comparing DAT and TAT regimens between the two study groups, the composite of major and minor bleeding is not statistically significant [No PPI (DAT 30% vs. TAT 9%) p = 0.1197]; [PPI (DAT 0% vs. TAT 23%) p = 0.2571]. There were no differences in MACE events between groups.

**Conclusion:** This study was unable to demonstrate a significant reduction in bleeding rates with PPI therapy for A.Fib/A.Flutter patients receiving combination anticoagulant and antiplatelet therapy post-PCI.

References:

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