Anticoagulation and Antiplatelet Patterns in Patients with Atrial Fibrillation Post-Percutaneous Coronary Intervention

Erin A Woods1, Margaret L Ackman1, Michelle M Graham2, Sheri L Koshman2, Rosaleen M Boswell1, Arden R Barry1

1 Pharmacy Services, Alberta Health Services; 2 Division of Cardiology, University of Alberta; Edmonton, Alberta, Canada

BACKGROUND
• Dual antiplatelet therapy (DAPT) with acetylsalicylic acid (ASA) and a P2Y12 inhibitor is recommended to prevent stent thrombosis post-percutaneous coronary intervention with stent implantation (PCI)1
• 5–10% of patients undergoing PCI also have an indication for oral anticoagulation (OAC) such as atrial fibrillation (AF)2
• Triple antithrombotic therapy (TAT) with warfarin, clopidogrel and ASA is recommended in AF patients post-PCI with a CHADS2 score ≥2

OBJECTIVES
• Primary objective: To determine the proportion of patients post-PCI with non-vascular AF (NVAF) discharged on TAT (defined as warfarin, clopidogrel and ASA)
• Secondary objectives: proportion of patients discharged on DAPT (defined as clopidogrel and ASA), proportion of patients discharged on other combinations of antiplatelet and OAC agent(s), and determinants for use of TAT and DAPT

METHODS
• Retrospective chart review from January 1, 2011 to December 31, 2013 at the Mazankowski Alberta Heart Institute in Edmonton, Alberta
• Inclusion criteria: adult inpatients with NVAF as an indication for OAC (CHADS2 score ≥2) who underwent PCI
• Exclusion criteria: cardiovascular (CV) surgery during index hospitalization, mechanical devices requiring anticoagulation and transcatheter aortic valve implantation
• Patients with AF were identified through Medical Records and cross-referenced with patients who received PCI in the Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease (APPROACH) registry
• CHADS2 score was calculated without labile INR
• Baseline characteristics were included in a bivariate analysis for TAT and DAPT
• Positive characteristics in the bivariate analysis were included in a multivariate logistic regression analysis
• All statistical tests were performed with IBM SPSS Statistics (version 21, IBM Corporation, Armonk, NY)

RESULTS
• N = 71
• Baseline characteristics are included in Table 1
• Less than half of eligible patients (42.3%) were discharged on TAT (Figure 1)
• The second most common regimen utilized was DAPT (38.0%)
• Regimens that included a novel oral anticoagulant (NOAC) (apixaban, dabigatran, rivaroxaban) were recommended in 8.4% of patients
• No determinants for TAT were identified in the multivariate logistic regression; however, no patients with a previous gastrointestinal (GI) bleed were prescribed TAT on discharge
• Males were less likely and patients with gastroesophageal reflux disease (GERD) were more likely to be prescribed DAPT (Table 2)
• Of those patients discharged on TAT, 24% had a recommended duration of one year compared to 40% of patients discharged on DAPT (Figure 2)
• Most patients were prescribed TAT for one month for a bare metal stent and one year for a drug-eluting stent (Figure 3)

DISCUSSION
• Despite a guideline-based indication, less than half of patients received TAT
• Observed TAT rate lower than recent studies (65–70%)
• Observed DAPT rate similar to recent studies
• Non-evidence-based combinations of a novel oral anticoagulant (NOAC) and/or ticagrelor were prescribed in 18.2% of patients
• No patients with a previous GI bleed were recommended TAT likely due to the high bleed risk
• GERD and female sex were positive predictors for DAPT likely because female sex and gastrointestinal disease have been shown to be risk factors for bleeding

REFERENCES