INTRODUCTION

• Guidelines recommend dual antiplatelet therapy with a P2Y12 inhibitor and aspirin (ASA) in patients that undergo percutaneous coronary intervention (PCI) with stenting.

• The comparative efficacy and safety of the antiplatelet agents in a real-world setting are unclear, particularly for ticagrelor and prasugrel.

OBJECTIVE

• To evaluate the comparative efficacy of three P2Y12 inhibitors, including crossover, at preventing major adverse cardiovascular events (MACE).

METHODS

• Retrospective electronic medical record review of patients that underwent PCI within UPMC.

• Approved by IRB prior to commencement

• Primary Endpoint: cumulative incidence of MACE (composite of cardiovascular [CV] death, non-fatal MI, stroke, and target vessel revascularization [TVR])

• Non-fatal MI: non-elective readmission + ICD-9 code for MI

• Stroke: non-elective readmission + ICD-9 code for stroke

• TVR: non-elective re-admission with annotation of catheterization report for target vessel

• Patients identified by ICD-9 code for PCI in inpatients and PCI procedure code or procedure date for outpatients

• Honest broker extracted and de-identified data from electronic health records

• Sources of data: medication charge codes, patient reports (emergency department, admission, discharge summary, outpatient visits), medical record abstract file, labs, transfusions, catheterization reports

• Admission notes were reviewed and annotated for home medications and smoking status

• Catheterization reports were reviewed and annotated for identification of TVR

• Pooled data was analyzed using SPSS

• Parametric and nonparametric comparative tests were used to assess differences in baseline characteristics.

• Kaplan-Meier with log rank, univariate logistic regression, and multivariate logistic regression were used to evaluate primary endpoint

RESULTS

Inclusion Criteria: PCI from July 1, 2010 to December 31, 2013 with follow-up through November 26, 2014

Received Cliniodogrel, Prasugrel or Ticagrelor

Exclusion Criteria: Age <18 years old, Pregnancy, Prisoner

Initial Data Set, n = 8,284

Inclusion Criteria: PCI from July 1, 2010 to December 31, 2013 with follow-up through November 26, 2014

Received Cliniodogrel, Prasugrel or Ticagrelor

Exclusion Criteria: Age <18 years old, Pregnancy, Prisoner

Final Data Set, n = 8,129

Cliniodogrel (Plavix®) n = 6,874
Prasugrel (Effient®) n = 605
Ticagrelor (Brilinta®) n = 181
Switched n = 469

DISCLOSURES & REFERENCES

The authors of this paper have no actual or potential conflicts of interest.

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