Clopidogrel Is Rarely Used and Associated with Less Re-Hospitalization In Patients with Perioperative Myocardial Infarction Complicating CABG-Surgery


Objective

Primary aim:
• Is clopidogrel use after peri-CABG myocardial infarction (MI) associated with a decreased rate of nonfatal MI, nonfatal stroke, or death during 28 day follow up?

Secondary aims:
• Is clopidogrel use after peri-CABG MI associated with decreased rate of rehospitalization during 28 day follow up?

Background

• Perioperative MI after CABG has been shown to be associated with in-hospital mortality with some studies demonstrating worse long-term outcome.

• Since the etiology of perioperative MI can be multifactorial, including ischemic damage, vein graft failure, and new plaque rupture, management of this issue is unclear.

• We investigated whether clopidogrel use after peri-CABG MI improves short-term outcomes.

METHODS

We analyzed patients who had a perioperative MI after a CABG from 3 clinical trials: RED-CABG, MEND-CABG II and PREVENT IV (n=9,117) (Figure 1). A perioperative MI was defined as having a CK-MB value >5 times the upper limit of normal within 24 hours of surgery (n=2052).

• Clopidogrel use was identified if a patient was given clopidogrel after surgery and pre-discharge.

• A Cox regression model estimated the hazard ratio comparing clopidogrel vs. no clopidogrel for the composite endpoint of death, MI or stroke and for rehospitalization. Models were adjusted for age, on or off cardiopulmonary bypass, recent MI, pre-operative clopidogrel use, and recent PCI.

Results

• Clopidogrel use (n=5,272) and no clopidogrel use (n=1,525) groups were similar in comorbidities (Table 1). Median age was 66 years (25%, 75% 56-72.3), 42% had diabetes, 12% had prior stroke, 18% had heart failure, and 14% had peripheral vascular disease.

• There was no difference in MI, stroke, death, or the composite endpoint at 30 days between treatment groups (Table 2). There were significantly fewer re-hospitalizations at 30 days in the clopidogrel group (adjusted HR 0.71, CI 0.52-0.97, p=0.033) (Figure 2).

Table 1. Baseline Characteristics

Table 2. Outcomes Clopidogrel vs. No Clopidogrel

Conclusions

Only one quarter of patients were treated with clopidogrel for peri-CABG MI. Clopidogrel use did not result in a difference in MI, stroke, or death but was associated with fewer re-hospitalizations at 30 days.

Disclosures: None