Title: Patient Adherence to Clopidogrel Following Percutaneous Coronary Intervention

Specific Aims: The present study examined a cohort of patients who underwent percutaneous coronary intervention (PCI) with drug eluting stents (DES) from 10/1/03-9/30/04:
1. To determine the percentage of patients discharged from the hospital with clopidogrel.
2. To assess adherence to clopidogrel 3 months after PCI using sirolimus-eluting stents and 6 months after PCI using paclitaxel-eluting stents (the minimum recommended duration of clopidogrel following PCI with DES in 2003-2004), and 1 year following PCI for all patients.
3. To describe patient characteristics that may affect adherence.

Hypothesis: The vast majority of patients are adherent to clopidogrel 3 months after sirolimus-eluting stent (SES) placement, slightly less are adherent 6 months after paclitaxel-eluting stent (PES) placement, and significantly less are adherent 1 year after DES placement.

Methods Used: We reviewed charts and pharmacy records of 175 patients who had PCI at the West Haven VA Hospital from 10/1/03-9/31/04 to determine adherence to clopidogrel. Patients were defined as “totally adherent” if they missed <7 consecutive days of clopidogrel during a given interval, “partially adherent” if they missed 7-30 consecutive days, and “non-adherent” if they missed >30 consecutive days or stopped clopidogrel. We also reviewed charts to determine patient age, marital status, medications, psychiatric disease, alcohol use, substance abuse, provider contacts, and use of clopidogrel prior to PCI.

Results: Of 175 patients, 69 were excluded (49 obtained clopidogrel outside the VA Connecticut Healthcare system, 18 received bare-metal stents or angioplasty only, and 2 had clopidogrel allergies), resulting in a cohort of 106 patients. Of these patients, 54 (51%) received SES, 51 (48%) received PES or both SES and PES, and 1 (1%) received a DES of undefined type. 71 (67%) had clopidogrel on-hand at hospital discharge, and 20 (19%) filled a prescription for clopidogrel within 30 days of discharge. 15 (14%) never filled a prescription. At 3 months after PCI, 41 (76%) patients with SES were totally adherent to clopidogrel, 10 (19%) were partially adherent, and 3 (6%) were non-adherent. At 6 months, 18 (37%) patients with PES or both PES and SES were totally adherent, 14 (31%) were partially adherent, and 13 (31%) were non-adherent. At 1 year, 41 patients (39%) were taking clopidogrel. In our cohort, 54 patients (51%) were >65 years-old, 48 (45%) were unmarried, 27 (25%) had psychiatric illness, 60 (57%) took >7 medications, 8 (8%) drank >2 alcoholic beverages per day, 4 (4%) were active substance abusers, 8 (8%) had <4 provider contacts in the year following PCI, and 81 (76%) did not take clopidogrel prior to PCI.

Conclusions: Many patients receiving PCI with DES are not discharged with clopidogrel, and many do not remain adherent for minimally-accepted lengths of time. This is important given the established relationship between non-adherence to clopidogrel after DES placement and increased risk of stent thrombosis, myocardial infarction, and death. As new guidelines recommend at least of 1 year of clopidogrel following PCI with DES, interventions designed to improve patient adherence are essential. Using our data set, further analyses will determine the relationship between patient characteristics and non-adherence to clopidogrel, enabling the initiation of strategies to target groups of patients at high risk for non-adherence.