💧 MYOCARDIAL ISCHEMIA AND INFARCTION

ANGIOGRAPHIC CHARACTERISTICS OF CORONARY STENT THROMBOSIS

Authors: William Bennett, Khung Keong Yeo, Jason H. Rogers, Reginald I. Low, Etisham Mahmud, University of California San Diego, San Diego, CA, University of California Davis, Sacremento, CA

Background: Angiographic characteristics for U.S. patients who present with stent thrombosis (ST) resulting in acute coronary syndromes (ACS) have not been described.

Methods: 113 consecutive episodes of angiographically confirmed ST in 106 patients from Jan 2005 - Sep 2009 in 2 academic medical centers were retrospectively analyzed for angiographic characteristics with quantitative coronary angiography (QCA).

Results: Angiographic and QCA characteristics are reported (Table). The mean age was 60.3 years. In hospital mortality was 5.6%. Angiographic success was achieved in 93/104 (90%) lesions. The RCA or LAD was affected in 78/109 (72%) of lesions. QCA performed in 88 patients revealed collaterals in 18 patients (20%) but absent in all 6 in-hospital deaths. Thrombus grade was 4 or 5 in 78/88 (88%) of lesions. The type of index stent (BMS vs. DES) was not associated with thrombus grade, thrombus location within the stent, presence of collaterals or angiographic success. Proximal left anterior descending coronary artery (LAD) lesions were involved in 5/6 of the in-hospital deaths with the remaining lesion was located in the left main coronary artery. TIMI grade 3 flow was achieved in 5/6 patients with in-hospital death.

Conclusions: Stent thrombosis results in lower than previously reported in-hospital mortality. Though all 6 deaths involved proximal vessel ST, and absence of collaterals, no statistically significant angiographic or QCA characteristics were predictive of in-hospital mortality.

Angiographic Characteristics of Coronary Artery Stent Thromboses	
Death, n (%)	6 (5.6%)
Primary Vessel LM LAD LCx RCA SVG	2 (2%) 52 (48%) 21 (19%) 29 (27%) 5 (5%)
TIMI Flow Pre 0 1 2 3	79 (72%) 7 (6%) 9 (8%) 14 (13%)
TIMI Flow Post 0 1 2 3	6 (5%) 1 (1%) 3 (3%) 100 (91%)
Thrombus Grade 1 2 3 4 5	1 (1%) 2 (2%) 7 (8%) 18(20%) 60 (68%)
Thrombus Grade Post inflation 1 2 3 4 Large thrombus burden	2 (3%) 11 (18%) 38 (63%) 9(15%) 60 (68%)
Angiographic Success	93/104 (90%)
Proximal Vessel Reference	Mean 2.92±0.70mm
Distal Vessel Reference	Mean 2.54±0.64mm
Collaterals Yes No	18 (20%) 70 (80%)