Analysis of Early Vs. Late Drug Eluting Stent Thrombosis

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Background: The risk of stent thrombosis (ST) following drug eluting stent (DES) implantation may extend very long time beyond the initial period after successful implantation.
Objective: To evaluate the clinical outcomes of patients who presented with DES-related, old, early (<30 days) and late (>30 days) angiographic ST.
Methods: Between 2004 and 2011, 52 patients underwent PCI with DES implantation at our institution. Patients readmitted with confirmed diagnosis of ST were included in and were followed. Clopidogrel therapy was prescribed for 3 to 12 months following the index procedure. Clinical follow up was obtained and adjudicated at one and six month following any ST event.
Results: Angiographically documented stent thrombosis occurred in all 52 patients. Early stent thrombosis was noted in 10 (19%) patients, and late stent thrombosis in 42 (81%) patients. The time interval to early thrombosis was 6.4±3.8 days [median 5-range 3.9-100 days] as compare with time interval to late ST of 873±541days [median 720- range 480-1080 days]. At 6 months the subsequent major adverse cardiac event rate (including death, re-infarction, recurrent ST or need for emergent CABG) was 30% in the early group and 19% in the late ST group(p=0.9). Overall cardiac mortality rate was higher in the early ST group 20% and lower in the late ST group 2.4% (p<0.05).
Conclusions: Following DES implantation at our center, the majority of patients developed late ST (>30 days) and beyond the period recommended for dual anti-platelet pharmacotherapy. We noticed greater mortality rate following early vs. late ST event, while MACE rates did not differed between the groups.