Outcomes of Early Vs Late Stent Thrombosis Following Drug Eluting Stents Implantation

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Background

Stent thrombosis (ST) is an uncommon but serious complication that almost always presents as death or a large non-fatal MI following drug eluting stent (DES) 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 a total of 52 patients underwent percutaneous coronary intervention (PCI) with DES implantation. Patients readmitted with confirmed diagnosis of ST were included in and were followed up. Clopidogrel therapy was prescribed for 3 to 12 months. Clinical follow up was obtained and adjudicated at one and six month following any ST event.

Results

Angiographically documented stent thrombosis occurred in 52 patients. Early stent thrombosis was noted in 10 (19%) patients, and late stent thrombosis in 42 (81%) patients. The time interval to early ST was 6.4±3.8 days [median 5, range 3.9-100 days] as compared with time interval to late ST 873±541 [median 720, range 480-1080]. Lower rate of ST has been encountered in the newer generation DES(Endeavor Resolute, Xience Prime) as compared to the first generation DES (Endeavor Sprint, Cypher and Taxus). During one month follow up after ST event, death occurred in 2 (20%) patients in the early ST group, recurrent ST occurred in two (4.8%) in the late ST Group, emergency CABG was needed in 2 (5%). 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%).

Conclusion

Following DES implantation, 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 differ in-between the groups.