In-stent Restenosis in DES: Clinical Characteristics and Adverse Outcomes

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Objective: We characterized the pattern, treatment, and outcomes of drug-eluting stent (DES) in-stent restenosis (ISR) in a consecutive group of patients treated at our institution.
Methods: We determined the incidence and major adverse clinical events in 117 consecutive patients with DES failure aiming a series of 4394 who received DES between 1/2004 and 11/2008. We analyzed clinical data, procedural parameters, and outcomes of DES restenosis. Patients with stent thrombosis were excluded.
Results: The incidence of DES failure presented as ISR was 2.7%. Stents with ISR were Cypher (n=90), Endeavor (n=22), and Taxus (n=9). The mean time to restenosis was 13.9±11.6 months. Mean age in the ISR group was 65±11 years, 77% were male, and 60% had diabetes mellitus. Lesion locations were mostly in the LAD (40%). Unstable angina was the clinical presentation in 70 (60%) patients, and 21% had already prior ISR events. At six-months, 6 patients developed myocardial infarction (5%), restenosis at follow-up was diagnosed in 12 patients (10.3%) and the overall major adverse cardiac events were 14.5% (17 patients), and two patients died (1.7%).
Conclusions: According to our experience, DES-related ISR is relatively infrequent but remains a major clinical problem and a therapeutic challenge. It occurs more frequently in diabetics and complex lesion subsets. The overall intermediate-term prognosis following repeat PCI is tolerable.