Stent Thrombosis According to Clinical Syndrome Acuity in Everolimus- and Paclitaxel-Eluting Stents

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Background: Although the risk of stent thrombosis is increased in patients with acute coronary syndromes (ACS), drug eluting device specific outcomes relative to clinical syndrome acuity are absent.

Methods: We performed a patient-level pooled analysis from the prospective, randomized SPIRIT II, III, IV and COMPARE trials in which 2,381 pts with ACS and 4,404 pts with stable CAD were randomized to everolimus-eluting stent (EES) vs paclitaxel eluting stent (PES). Kaplan-Meier estimates of stent thrombosis rates were assessed at 2 years, stratified by the stent used and clinical presentation (stable angina, unstable angina, non-ST elevation MI (NSTEMI), and ST elevation MI (STEMI)).

Results: Although there were no differences in baseline characteristics between patients randomized to EES vs PES, both unadjusted and adjusted hazards for ARC definite or probable stent thrombosis at 2-year were significantly lower in patients randomized to EES, irrespective of the clinical presentation (adjusted HR (95%CI) = 0.24(0.11-0.49) and 0.36 (0.19-0.68) in patients with ACS and stable coronary artery disease, respectively). While in patients treated with EES the rate of stent thrombosis was similar across the clinical syndromes (p for trend =0.19), patients treated with PES had a significantly higher rates of stent thrombosis in patients with non-STEMI and STEMI (p for trend = 0.0004).

Conclusions: In patients treated with EES the risk for stent thrombosis remains relatively low independent of the clinical syndrome acuity, while treatment with PES was associated with increased risk of stent thrombosis particularly in STEMI and non-STEMI patients.