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i2 SUMMIT

EVALUATION OF THIENOPYRIDINE COMPLIANCE AND STENT THROMBOSIS RATES AFTER EVEROLIMUS-ELUTING AND PACLITAXEL-ELUTING STENT IMPLANTATION: 3-YEAR RESULTS FROM THE SPIRIT III ANALYSIS

i2 Poster Contributions
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Background: Stent thrombosis remains a safety concern with drug-eluting stents. Long term antiplatelet therapy is recommended after stenting; compliance with such therapy may reduce the risk of stent thrombosis. In this study, the occurrence of stent thrombosis, relative to thienopyridine compliance, was evaluated in patients treated with the XIENCE V® everolimus-eluting stent (EES) and the TAXUS® Express2 paclitaxel-eluting stent (PES).

Methods: In the SPIRIT III trial, 1,002 patients with 1 or 2 lesions ≤28 mm in length and reference vessel diameter 2.5 - 3.75 mm were prospectively randomized 2:1 to EES vs. PES. Thienopyridine usage was required by protocol for at least six months, with subsequent continuation at the investigators' discretion. Data on thienopyridine compliance were collected prospectively.

Results: Adherence to thienopyridine was similar between the EES and PES arms at 6 months (94.4% vs. 94.2%), 1 year (71.9% vs. 70.8%), 2 years (57.3% vs. 60.5%), and 3 years (52.4% vs. 52.0%). Regardless of treatment stent type, patients who discontinued a thienopyridine had a higher rate of stent thrombosis than those who continued a thienopyridine through 3 years (1.3% vs. 0.5%, p=0.32).

Stent thrombosis rates tended to be lower in EES vs. PES patients (0.4% vs. 0.8%; p=0.55) who never discontinued a thienopyridine during the 3-year follow-up period. In patients who discontinued a thienopyridine before 6 months, stent thrombosis rates were similar in EES and PES arms (2.7% vs. 2.9%, p=1.00). In contrast, among patients who discontinued a thienopyridine after 6 months and before 3 years, fewer EES patients tended to develop stent thrombosis compared to PES patients (0.3% vs. 2.1%, p=0.11).

Conclusions: Discontinuation of thienopyridine usage before 6 months was associated with a high stent thrombosis rate with both EES and PES. Thienopyridine usage for longer than 6 months tended to result in lower observed stent thrombosis rates in EES compared to PES. Larger studies are required to determine whether stent thrombosis rates are lower with EES compared to PES after thienopyridine discontinuation beyond 6 months.