Safety of Short-Term Discontinuation of Anti-Platelet Therapy in Patients with Drug-Eluting Stents

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Background: Anti-platelet therapy is often discontinued in patients with drug-eluting stents (DES) who are undergoing surgical procedures. However, the safety of short-term discontinuation of these agents remains unknown.

Methods: We systematically searched Medline for reported cases of late stent thrombosis (LST) published between January 2001 and February 2008. LST was defined as angiographically-confirmed cardiac events occurring ≥ 30 days following index percutaneous coronary intervention (PCI) with a DES. We restricted our study to reports that specified the time from discontinuation of antiplatelet therapy to LST.

Results: We identified 148 cases of LST from 76 articles. Patients had a mean age of 59 ± 13 years, and 89% were male. The median time from PCI to LST was 365 days (95% CI=278, 435). If patients stopped both agents simultaneously, the median time to event was 7 days. If patients had previously stopped their thienopyridine with no ill effect and subsequently stopped ASA, the median time to event was 7 days from ASA cessation. If the thienopyridine was stopped but ASA was maintained, the median time to event was 112 days. Among the 47 patients who stopped both agents, 35 cases of LST (74%) occurred within 10 days. Among the 84 patients who discontinued a thienopyridine but continued ASA, only 6 cases of LST (7%) occurred within 10 days ($p<0.0001$).

Conclusion: If ASA therapy is maintained, short-term discontinuation of thienopyridine for < 10 days is relatively safe in patients with DES.