

# More than 12 months of dual antiplatelet therapy after implantation of drug-eluting stents?

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Several pivotal clinical trials have shown that the use of drug-eluting coronary stents is associated with significant reductions in the risks of restenosis and need for target-lesion revascularization, as compared with use of bare-metal coronary stents. On the basis of the results of these trials, drug-eluting stents have been widely used for percutaneous coronary intervention (PCI) in clinical practice.

However, some longer-term studies have shown that drug-eluting stents, as compared with bare-metal stents, are associated with increased rates of late stent thrombosis, death, or myocardial infarction. It has been proposed that the occurrence of late clinical events may be due to delayed arterial healing after the implantation of drug-eluting stents.

Early discontinuation of dual antiplatelet therapy has been identified as a risk factor for late stent thrombosis in patients with drug-eluting stents.

Current PCI guidelines recommend that clopidogrel, at a dose of 75 mg daily, should be given for at least 12 months after implantation of drug-eluting stents if patients are not at high

risk for bleeding. However, the optimal duration of dual antiplatelet therapy and the risk-benefit ratio for long-term dual antiplatelet therapy remain uncertain for patients receiving drug-eluting stents. The findings of observational studies have been inconsistent and to date, no randomized trials have been performed to address this issue.

Authors evaluated the effect of the use of dual antiplatelet therapy for more than 12 months (median duration was 19.2 months) on long-term clinical outcomes in patients who had undergone initial PCI with the placement of a drug-eluting stent.

2701 patients were randomized between July 2007 and Sep 2008 in two large trials. After one year of dual antiplatelet therapy, patients receive clopidogrel plus aspirin or aspirin alone. The primary end point was the first occurrence of myocardial infarction or death from cardiac causes after assignment to a treatment group.

The principal secondary end points were death from any cause; myocardial infarction; stroke (from any cause); stent thrombosis; repeat revascularization; a composite of myocardial infarction or death from any cause; a

composite of myocardial infarction, stroke, or death from any cause; a composite of myocardial infarction, stroke, or death from cardiac causes; and major bleeding, according to TIMI definition.

Authors conclude that the use of dual antiplatelet therapy for a period longer than 12

months in patients who had received drug-eluting stents was not significantly more effective than aspirin monotherapy in reducing the rate of myocardial infarction or death from cardiac causes. These findings should be confirmed or refuted through larger, randomized clinical trials with longer-term follow-up. □



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*Comment on a paper:*

**Seung-Jung Park, MD; Duk-Woo Park, MD; Young-Hak Kim et al** – Duration of Dual Antiplatelet Therapy after Implantation of Drug-Eluting Stents. *NEJM* March 15, 2010 (10.1056/NEJMoa1001266)