

MINNEAPOLIS HEART INSTITUTE'S
JOURNALSCAN
 The Physician's Source for the Latest in Cardiovascular Care Essential to Primary Care Practice

CLOPIDOGREL USE AND LONG-TERM CLINICAL OUTCOMES AFTER DRUG-ELUTING STENT IMPLANTATION

Recent studies of drug-eluting intracoronary stents suggest current antiplatelet regimens may not be sufficient to prevent late stent thrombosis. This study assessed the association between clopidogrel use and long-term clinical outcomes of patients receiving drug-eluting stents (DES) and bare-metal stents (BMS) for treatment of coronary artery disease. This observational study examined consecutive patients receiving intracoronary stents at Duke Heart Center, a tertiary care medical center in Durham, NC, between January 1, 2000, and July 31, 2005, with follow-up contact at 6, 12 and 24 months through September 7, 2006. Study population included 4666 patients undergoing initial percutaneous coronary intervention with BMS (n = 3165) or DES (n = 1501). Landmark analyses were performed among patients who were event-free (no death, myocardial infarction [MI], or revascularization) at 6- and 12-month follow-up. At these points, patients were divided into 4 groups based on stent type and self-reported clopidogrel use: DES with clopidogrel, DES without clopidogrel, BMS with clopidogrel, and BMS without clopidogrel. The main outcome measures were death, nonfatal MI and the composite of death or MI at 24-month follow-up.

Among patients with DES who were event-free at six months (637 with and 579 without clopidogrel), clopidogrel use was a significant predictor of lower adjusted rates of death (2.0% with vs. 5.3% without; difference, -3.3%) and death or MI (3.1% vs. 7.2%; difference, -4.1%) at 24 months. However, among patients with BMS (417 with and 1976 without clopidogrel), there were no differences in death (3.7% vs. 4.5%; difference, -0.7%) and death or MI (5.5% vs. 6.0%; difference, -0.5%). Among patients with

DES who were event-free at 12 months (252 with and 276 without clopidogrel), clopidogrel use continued to predict lower rates of death (0% vs. 3.5%; difference, -3.5%) and death or MI (0% vs. 4.5%; difference, -4.5%) at 24 months. However, among patients with BMS (346 with and 1644 without clopidogrel), there continued to be no differences in death (3.3% vs. 2.7%; difference, 0.6%) and death or MI (4.7% vs. 3.6%; difference, 1.0%).

The extended use of clopidogrel in patients with DES may be associated with a reduced risk for death and death or MI. However, the appropriate duration for clopidogrel administration can only be determined within the context of a large-scale randomized clinical trial.

Eisenstein EL, Anstrom KJ, Kong DF, Shaw LK, Tuttle RH, Mark DB, et al. Clopidogrel use and long-term clinical outcomes after drug eluting stent implantation. JAMA. 2007 Jan 10;297(2):159-68. Epub 2006 Dec 5.

Comment:

This study examined whether long-term Plavix administration affected late thrombosis following drug-eluting stent (DES) or bare metal stent (BMS) implantation. Overall rates of death or MI were similar in both stent types during two-year follow-up. The major difference was that in patients placed with DES, long-term Plavix use was associated with a significant decrease in event rates. This was not the case in patients who received a BMS. Limitations of the study include its prospective nature and lack of control for other risk factors for stent thrombosis (ACS at presentation, presence of CRI, length and number of stents implanted, and presence of other high risk

angiographic features). Our present practice is to treat patients who receive DES with Plavix and aspirin for a minimum of 12 months, with a preference to extend this to 24 months in the absence of complications.

Patients who receive BMS are prescribed Plavix and aspirin for a minimum of 1 month with extension of up to 12 months if other clinical factors suggest doing so.

— **M. Nicholas Burke, MD**, senior consulting cardiologist, Minneapolis Heart Institute.

###

EDITOR-IN-CHIEF	MANAGING EDITOR
M. Nicholas Burke, MD	Michelle Croteau
<p><i>Minneapolis Heart Institute's Journal Scan</i> is produced regularly by the Minneapolis Heart Institute. <i>Journal Scan</i> provides expert, practical commentary on breaking cardiovascular research for primary care physicians.</p>	
<p>Minneapolis Heart Institute 920 East 28th Street, Suite 300 • Minneapolis, Minnesota 55407 • Telephone: 612-863-4899 View electronically at www.mplsheart.com/journalscan</p> <p><i>The information in Journal Scan is for educational purposes only, and is not intended to be a replacement or substitution for professional medical care. Only a qualified health care provider can diagnose and treat a health problem or disease. The Minneapolis Heart Institute will not be responsible for the misuse of the information in this newsletter.</i></p> <p>© Copyright 2007 Minneapolis Heart Institute. All Rights Reserved. Minneapolis Heart Institute® is a trademark of Minneapolis Heart Institute, Inc.</p>	