www.medscape.com

Shortening Dual Antiplatelet Therapy Ups MI Risk in ACS

Sue Hughes

March 14, 2018

ORLANDO — Reducing dual antiplatelet therapy (DAPT) to 6 months in patients with acute coronary syndrome (ACS) undergoing percutaneous coronary intervention (PCI) with drug-eluting stent placement was associated with an increased risk for myocardial infarction, in the SMART-DATE trial.

Although the trial met its noninferiority composite primary endpoint when comparing 6 months to 12 months of DAPT, "the increased risk of MI with 6-months' treatment prevents us from concluding that short-term dual therapy is safe in patients with acute coronary syndrome undergoing PCI with current-generation drug-eluting stents," reported senior author, Hyeon-Cheol Gwon, MD, Sungkyunkwan University School of Medicine, Seoul, South Korea.

"Based on this data, my final message is that prolonged DAPT for a minimum of 12 months should remain the standard of care in ACS patients without excessive risk of bleeding," he concluded.

Gwon presented the SMART-DATE trial at the American College of Cardiology (ACC) 2018 Annual Scientific Session. The study was also simultaneously published online in *The Lancet*.

He explained that current guidelines recommend aspirin plus a P2Y12 inhibitor for 12 months or longer in patients with ACS. However, prolonged DAPT increases bleeding and has been associated with increased mortality in several studies, and the optimal duration of DAPT in patients with ACS undergoing PCI with drug-eluting stents remains controversial.

To look at this further, Gwon and colleagues conducted the SMART-DATE trial, in which 2712 patients with ACS undergoing PCI in South Korea were randomly assigned to either 6 months or 12 months or longer of DAPT. Clopidogrel was used as the P2Y12 inhibitor in about 80% of patients.

The primary endpoint, a composite of all-cause death, myocardial infarction (MI), or stroke at 18 months, occurred in 4.7% of the 6-month group vs 4.2% of the 12-month group (absolute risk difference, 0.5 percentage point; upper limit of one-sided 95% CI, 1.8%; *P* for noninferiority = .03 with a predefined noninferiority margin of 2.0%).

Although all-cause mortality or stroke did not differ significantly between the two groups, MI occurred more frequently in the 6-month DAPT group than in the 12-month or longer DAPT group: 1.8% vs 0.8% (hazard ratio [HR], 2.41; *P* = .02).

Stent thrombosis occurred in 1.1% of patients in the 6-month DAPT group compared with 0.7% in the 12-month or longer group (HR, 1.50; *P* = .32).

The rate of Bleeding Academic Research Consortium type 2 to 5 bleeding was 2.7% in the 6-month group and 3.9% in the 12-month or longer group (HR, 0.69; *P* = .09).

In a post hoc landmark analysis, the composite endpoint of all-cause death, MI, or stroke tended to occur more frequently in the 6-month DAPT group than in the 12-month or longer DAPT group between 6 months and 18 months after the index PCI.

Noting that non–target vessel MI occurred four times more frequently in the 6-month DAPT group than in the 12-month or longer DAPT group, Gwon suggested that "prolonged DAPT might reduce the risk of MI by prevention of non–target vessel MI rather than by reduction of stent thrombosis in patients with ACS."

ACS vs Stable Coronary Disease

Discussing the trial at an ACC press conference, Dipti Itchhaporia, MD, Hoag Memorial Hospital Presbyterian, Newport Beach, California, said, "This trial reinforces that the ACS patient is different from a patient with stable coronary disease. ACS patients have an increased risk of recurrent events, which is the basis of the current guidelines for dual antiplatelet therapy for at least 12 months in this population."

Interventionalists have been focused on trying to reduce the bleeding risk with these drug using radial access for PCI and shorter drug durations, she said, "and we have thought that maybe with the newest generation of drug-eluting stents 6 months' dual antiplatelet therapy may be enough."

"But this trial has nicely shown that this is not the case, and limiting dual therapy to 6 months is associated with an increased risk of recurrent MI," she said. "So we have to stick to the current guidelines of giving dual antiplatelet drugs for a minimum of 12 months or potentially longer depending on clinical criteria."

Commenting for *theheart.org* | *Medscape Cardiology* was Daniel Simon, MD, president and chief academic officer, University Hospitals, Cleveland, Ohio, who was part of the previous large-scale DAPT trial.

"ACS patients are at an increased risk of recurrent cardiovascular events, especially MI. SMART-DATE adds to a growing body of evidence, including the DAPT and PEGASUS trials, that prolonged DAPT reduces spontaneous or non–target lesion MI," Simon said. "SMART-DATE reminds us of the importance of assessing the balance of ischemic and bleeding risk for individual patients, especially those presenting with ACS. "

In a "Comment" accompanying the *Lancet* publication, Zuzana Motovska, MD, University Hospital Kralovske Vinohrady, Srobarova, Prague, and Deepak L Bhatt, MD, Brigham and Women's Hospital Heart and Vascular Center, Boston, Massachusetts, point out that in patients with ACS, the daily risk for ischemia significantly exceeds the daily risk for bleeding beyond 30 days, supporting the use of DAPT during the first year after MI and potentially beyond.

They note that many investigations are evaluating how to optimize DAPT, including scores for gauging ischemic and bleeding risk with different durations of DAPT that seem promising, guiding therapy by platelet function testing or genotyping, and using different combinations of antiplatelet and anticoagulant therapy.

"Nevertheless, for the time being, a minimum of 12 months of DAPT after acute coronary syndrome should be considered as the standard of care, while 6 months of DAPT is likely to be reasonable in patients at high baseline bleeding risk or with bleeding while on DAPT," they conclude.

The SMART-DATE study was supported by Abbott Vascular Korea, Medtronic Vascular Korea, Biosensors Inc, and Dong-A ST. Gwon has received research grants from Abbott Vascular, Boston Scientific, and Medtronic and speaker's fees from Abbott Vascular, Boston Scientific, and Medtronic.

American College of Cardiology (ACC) 2018 Annual Scientific Session. Presentation 409-12. Presented March 12, 2018.

Lancet. Published online March 12, 2018. Abstract, Comment

For more from theheart.org | Medscape Cardiology, follow us on Twitter and Facebook

Cite this article: Shortening Dual Antiplatelet Therapy Ups MI Risk in ACS - *Medscape* - Mar 14, 2018.