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INTERVENTIONAL CARDIOLOGY

DAPT USE AND DES TYPE

In patients who have undergone stent implantation in a coronary artery, the optimal duration of dual antiplatelet therapy (DAPT) is likely to be dependent on the type of drug-eluting stent (DES) used. Moreover, the incidence of stent thrombosis should not be evaluated independently of DAPT use in future DES trials or in re-evaluations of available data. These conclusions come from a new analysis of data from PROTECT.

The Endeavor® zotarolimus-eluting stent (E-ZES; Medtronic Vascular, Inc., USA) and the Cypher® sirolimus-eluting stent (C-SES; Cordis Corporation, USA) have different drug, polymer, and drug-release characteristics, and induce different vascular healing responses. Edoardo Camenzind, Chair of the PROTECT steering committee, describes the E-ZES as having "a bare-metal-stent-like, long-term healing response" and the C-SES as "a potent, strong, neointimal-growth-inhibiting stent".

In PROTECT, these two DES types were associated with a similar total incidence of definite or probable stent thrombosis over 3 years. However, between 1 and 3 years after stent implantation, when DAPT use was low, a lower incidence of stent thrombosis was noted for patients who received the E-ZES ($n=4,357$) compared with patients who received the C-SES ($n=4,352$). The investigators assessed whether the influence of DAPT on the risk of stent thrombosis differed for the two DES types in this new *post-hoc* analysis of the data.

At the 1, 2, and 3 year follow-up points, 80%, 33%, and 22% of patients, respectively, were using DAPT. Among patients implanted with a C-SES, DAPT use was associated with a reduced risk of stent thrombosis by 3 years. By contrast, in patients who received an E-ZES, the risk of stent thrombosis was not affected by DAPT. Among patients using DAPT, the incidence of stent thrombosis was similar for the two patient groups by 3 years. However, among patients not using DAPT, those implanted with an E-ZES had fewer instances of stent thrombosis than those who received a C-SES.

The investigators believe that patients implanted with a C-SES probably need longer thromboprotective therapy than individuals implanted with an E-ZES. They attribute the difference in the effect of DAPT on outcome to the different long-term healing characteristics of the two stent types.

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