

Best use of drug-eluting stents

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Compared with bare metal stents, drug-eluting stents substantially reduce the risk of angiographic and clinical recurrence but do not affect mortality or the short term or long term risk of myocardial infarction. The use of drug-eluting stents necessitates extended treatment with dual antiplatelet therapy (aspirin plus thienopyridine) which may cause bleeding complications and interferes with or even precludes surgery in case this is needed.

In addition, from a socioeconomic standpoint, the increased cost associated with drug-eluting stents is a major issue. Based on these considerations, drug-eluting stents should be avoided (a) when the expected benefit is low and (b) when the risk associated with extended dual antiplatelet therapy is high.

After placement of bare metal stents, the risk of restenosis varies considerably based on patient and lesion characteristics. Specifically, patients who do not suffer from diabetes have a substantially lower risk than diabetic patients. Strong lesion-specific predictors of a low risk of restenosis after bare metal stents include short lesion length and large vessel size.

Thus, in non-diabetic patients with a short lesion in a large vessel, the risk of restenosis after placement of a bare metal stent is below 10 %. In these subsets, a substantial benefit from drug-eluting stents cannot be expected. These considerations are confirmed by data from randomized studies as well as from registries.

In patients with bleeding disorders, the risk of bleeding complications during dual antiplatelet therapy is particularly high. On the other hand, premature discontinuation of dual antiplatelet therapy for imminent or overt bleeding carries a substantial risk of stent thrombosis with potentially fatal outcome. A particularly difficult patient subset in this respect concerns those in need for anticoagulation, such as patients with atrial fibrillation at high risk for thromboembolic events or patients with prosthetic valve replacement. In these patients, interventional cardiologists are well advised to use a bare metal stent to keep the need for dual antiplatelet therapy as short as possible.

Drug-eluting stents should also be avoided in patients with planned surgical procedure and in those likely to undergo a surgery within the next year.

Source: European Society of Cardiology

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