Risks associated with drug-eluting stents

We were interested to read Joost Daemen and colleagues' data on late thrombosis in drug-eluting stents (Feb 24, p 667).[1] These data cast doubt on newer recommendations to extend the length of dual antiplatelet therapy to 12 months,[2] prompted by the risk of late thrombosis after "premature" discontinuation of dual platelet therapy.[3]

We did a literature review using the term "late stent thrombosis". Primary sources were Medline and Embase, and the search was not limited to the English language. Our analysis criteria were: late stent thrombosis confirmed by angiography or autopsy, and detailed information about the timing of thrombosis or about antiplatelet medication at the time of the event.

95 cases of late stent thrombosis were found, for which detailed information on antiplatelet therapy was available in 90, and on timing in 68. 18 of 90 patients were receiving dual antiplatelet therapy at the time of late stent thrombosis. The timing varied between 1 month and 41 months after the initial procedure. 29 of 68 cases occurred after 12 months.

Together with the 61 cases described by Daemen and colleagues, our findings suggest that the problem of late stent thrombosis cannot be solved just by extending the length of dual antiplatelet therapy to 12 months. The increased bleeding rate with dual antiplatelet therapy (which further reduces the net benefit of drug-eluting stents), and the fact that the risk of late stent thrombosis according to Daemen and colleagues shows no evidence of diminution up to 3 years, questions the use of drug-eluting stents as a default strategy.

We think that, at present, patients with a drug-eluting stent should not discontinue dual antiplatelet treatment without undergoing an individual risk assessment from their cardiologist.[4] The possible necessity and risk of lifelong dual antiplatelet therapy now has to be taken into account at implantation.

We declare that we have no conflict of interest.

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Joost Daemen and colleagues[1] report on the risk of thrombosis after stent placement in the treatment of coronary artery disease. Much of the focus has settled on possible thrombotic sequelae of drug-eluting stent use, but we would like to highlight the need to consider gastrointestinal complications, especially with the widespread use of antiplatelet agents.

Bleeding has been shown to be associated with increased mortality[2] and it is therefore surprising that this serious adverse event is not included in adverse outcomes recorded during the follow-up period in Daemen and colleagues' study. In fact, bleeding of any description is not mentioned, despite it being a well recognised complication of treatment with aspirin and clopidogrel.[3] Presumably, bleeding contributed to all-cause mortality and morbidity as well as being a cause for discontinuation of antiplatelet agents. It would be of interest to know the number of significant bleeds (especially gastrointestinal) that occurred during this study. An epidemiological study[3] highlighted the hazards of combination therapy, with an odds ratio of 7·4 (95% CI 3·5–15·0) for significant bleeds compared with a single agent.

We do not dispute that the use of drug-eluting stents will continue to foster much debate and study.[4] All the same, we believe it is important to consider the whole patient and not just their vasculature. The risks of bleeding, particularly of gastrointestinal origin, also need to be borne in mind.

We declare that we have no conflict of interest.

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Authors' reply

We appreciate Jörg Carlsson and Peter Eriksson's comments about the disputable benefit of prolonged dual antiplatelet therapy.

Dual antiplatelet therapy (aspirin and thienopyridine) has been shown to significantly reduce mortality and myocardial infarction in patients