Continuation of dual anti-platelet therapy after drug-eluting stents in primary angioplasty beyond 12 months [version 1; peer review: 2 approved]

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Abstract
In this correspondence we discuss the results of the meta-analysis by De Luca et al. (2012) in the Archives of Internal Medicine which found that late myocardial reinfarction and stent thrombosis is more common in drug-eluting stents than in bare-metal stents. We discuss the clinical implications of this paper for dual anti-platelet therapy which did not receive sufficient attention in the original publication and the accompanying editorial.

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The meta-analysis by De Luca et al.\(^1\) showed that the incidence of late (> 2 years) myocardial reinfarction and stent thrombosis is significantly higher in drug-eluting stents (DES) compared to bare-metal stents (BMS) in primary angioplasty despite the significant reduction in long-term target vessel revascularization associated with DES.

While the Comment section of the paper briefly mentions the role of more potent and prolonged dual anti-platelet therapy in countering these worrisome findings, the related Commentary\(^2\) does not. However, in our view the current practice of discontinuing dual anti-platelet therapy after 12 months in DES in most patients is the most likely explanation for the observed increase in late stent thrombosis and reinfarction incidence, in concordance with pathological evidence that even beyond 40 months, DES do not fully epithelialize\(^3\). In the De Luca et al.\(^1\) meta-analysis, the DES survival curves for both reinfarction and stent thrombosis start diverging from the BMS curves one year after stent implantation until year 6.

This also raises the most relevant question for practitioners: should we prolong dual anti-platelet therapy beyond 12 months after DES implantation? The Dual Antiplatelet Therapy Study (DAPT) is expected to give us a definitive answer to this question in 2014\(^4\).

For the time being, it seems that the argument to continue dual anti-platelet therapy beyond 12 months, which is fully in line with the current ACCF/AHA/SCAI recommendation\(^5\) to continue dual anti-platelet therapy for at least 12 months after DES implantation, has gained in strength.

Author contributions
IM drafted the first version of this correspondence article and IM and CAG have substantially revised it after discussion.

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I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

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