Bleeding risk in patients prescribed dual antiplatelet therapy and triple therapy after coronary interventions: the ADAPTT retrospective population-based cohort studies

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Plain language summary

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Plain language summary

People who have a heart attack are treated with a stent to open up the blocked artery that caused the heart attack, with surgery to bypass the blocked artery or with medication only. Whatever the treatment, they are prescribed one or more antiplatelet drugs, either aspirin only or aspirin and an additional antiplatelet (clopidogrel, prasugrel or ticagrelor), for 12 months after the heart attack. Antiplatelets are given to prevent another heart attack, but increase the risk of bleeding.

We used a large general practice database and a database describing patients' attendances and admissions to hospital to determine how many people bleed with different antiplatelet combinations. We found that, overall, up to 1 in 10 people taking antiplatelets (rising to 2 in 10 if also taking an anticoagulant such as warfarin or dabigatran) reported a bleed. Among patients treated with surgery or medication only, we compared aspirin only (which is a less potent therapy) with aspirin and clopidogrel (a more potent therapy). Among patients treated with stents, we compared aspirin and clopidogrel (less potent therapy) with aspirin and prasugrel or ticagrelor (more potent therapy).

In all three populations, the more potent therapy increased the risk of bleeding by about one and a half times, but this was not offset by a reduced risk of having a subsequent heart attack. This may be explained by low adherence to the medication: between one-third and almost half of all patients did not adhere to their regimen, and non-adherence was generally higher among patients taking a more potent therapy. It may also be explained by bias inherent in the study, for example if the groups prescribed different antiplatelet regimens had different risks of having another heart attack. Nevertheless, the results show that doctors should be cautious about prescribing more potent antiplatelet therapy because it may increase serious bleeds without necessarily reducing the number of heart attacks.

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