

ANTIPLATELET THERAPY

Low-dose aspirin for CVD prevention

When taken with clopidogrel, daily aspirin doses greater than 100 mg can increase the likelihood of heart attack, stroke, bleeding event or death in patients with or at risk of developing cardiovascular disease. In comparison with daily aspirin doses less than 100 mg, “higher aspirin doses...[were] associated with a trend towards worse outcomes—[in terms of] both efficacy and bleeding—which was especially true among patients randomized to dual antiplatelet therapy with clopidogrel and aspirin,” according to Steven Steinhubl, of the Geisinger Clinic, PA.

Aspirin is routinely used for long-term prevention of cardiovascular events; however, clinical data clearly identifying the safest and most efficacious dose are lacking. For the management of cardiovascular disease, suggested aspirin doses range from 75 to 325 mg daily. Some studies have indicated that daily aspirin

doses less than 162 mg are associated with a low incidence of thrombotic and bleeding events. In the present study, Steinhubl *et al.* assessed outcomes in patients taking daily aspirin in doses ranging from 75 to 162 mg.

Steinhubl’s team carried out a post-hoc analysis of data from the CHARISMA study. Data were assessed from 15,595 patients with atherosclerotic disease or multiple risk factors for heart disease who were randomly assigned to receive either long-term clopidogrel (75 mg daily) or placebo. Patients were also assigned to receive daily aspirin at a dose determined by their physician (7,180 patients received <100 mg daily, 4,961 patients received 100 mg daily, and 3,454 patients received >100 mg daily).

The investigators found no overall differences in the efficacy (incidence of stroke, myocardial infarction or

cardiovascular death) or safety (incidence of serious bleeding events) of different aspirin doses. Discrepancies were, however, observed in the subgroup of patients who received clopidogrel together with aspirin, indicating a reduction in efficacy and safety for aspirin doses greater than 100 mg daily.

The researchers conclude that 81 mg or lower of aspirin daily optimizes efficacy and safety. Steinhubl hopes these data will “...serve as a cautionary tale to clinicians interested in altering a patient’s aspirin dose based on their measured responsiveness”.

Lisa Richards

Original article Steinhubl, S. R. *et al.* Aspirin to prevent cardiovascular disease: the association of aspirin dose and clopidogrel with thrombosis and bleeding. *Ann. Intern. Med.* 150, 379–386 (2009).

