

Abstract

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Aspirin "resistance" and risk of cardiovascular morbidity: systematic review and meta-analysis.

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OBJECTIVE: To determine if there is a relation between aspirin "resistance" and clinical outcomes in patients with cardiovascular disease.

DESIGN: Systematic review and meta-analysis.

DATA SOURCE: Electronic literature search without language restrictions of four databases and hand search of bibliographies for other relevant articles.

REVIEW METHODS: Inclusion criteria included a test for platelet responsiveness and clinical outcomes. Aspirin resistance was assessed, using a variety of platelet function assays.

RESULTS: 20 studies totalling 2930 patients with cardiovascular disease were identified. Most studies used aspirin regimens, ranging from 75-325 mg daily, and six studies included adjunct antiplatelet therapy. Compliance was confirmed directly in 14 studies and by telephone or interviews in three. Information was insufficient to assess compliance in three studies. Overall, 810 patients (28%) were classified as aspirin resistant. A cardiovascular related event occurred in 41% of patients (odds ratio 3.85, 95% confidence interval 3.08 to 4.80), death in 5.7% (5.99, 2.28 to 15.72), and an acute coronary syndrome in 39.4% (4.06, 2.96 to 5.56). Aspirin resistant patients did not benefit from other antiplatelet treatment.

CONCLUSION: Patients who are resistant to aspirin are at a greater risk of clinically important cardiovascular morbidity long term than patients who are sensitive to aspirin.

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