Long-Term Use of Clopidogrel for Patients With Stents or Acute Coronary Syndrome: A Review

Context
Ischemic heart disease (IHD) refers to reduced blood flow to the heart. IHD can cause blood clots to form in the arteries, leading to conditions such as acute coronary syndrome and stable angina. Therefore, it is a leading cause of death and disability. Surgical treatment for IHD includes percutaneous coronary intervention (also known as “ballooning”) and coronary artery bypass grafting (bypass surgery) to reopen the blocked artery. Some patients undergoing percutaneous coronary intervention may also have a stent implanted, which may be a bare-metal stent or a drug-eluting stent that is coated with medicine to help keep the artery open. Patients with IHD also typically receive medications to prevent blood clots — antiplatelet drugs.

Technology
Clopidogrel is a commonly used antiplatelet drug. It is a thienopyridine, which is a class of P2Y₁₂ platelet adenosine diphosphate receptor antagonist that inhibits the clumping of blood platelets.

Issue
Although clopidogrel is effective in the management of IHD, the optimal duration of clopidogrel therapy and the benefit of its long-term use (i.e., beyond one year) are unclear. A review of the clinical effectiveness, safety, cost-effectiveness, and evidence-based guidelines regarding long-term clopidogrel use in patients with a stent or with acute coronary syndrome will help inform decisions with these patients.

Methods
A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Key Messages
- Whether the long-term use of clopidogrel is effective for patients who have had a stent implanted or have acute coronary syndrome is uncertain.
- Guidelines recommend the long-term use of clopidogrel:
  - in patients with drug-eluting stents*
  - in combination with aspirin, for patients with drug-eluting stents who are not experiencing bleeding or tolerability issues.*

*Based on low-quality evidence.

Results
The literature search identified 624 citations, with an additional article identified from handsearching. Of these, 36 were deemed potentially relevant and 13 met the criteria for inclusion in this review — 5 reports (reporting on 2 randomized controlled trials), 6 non-randomized studies, and 2 evidence-based guidelines.

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