



Limited evidence for effectiveness of drug-eluting coronary artery stents

Clinical question

How effective are drug-eluting stents compared with bare metal stents in the reduction of cardiac events (angina or acute coronary syndrome)?

Bottom line

Drug-eluting stents are effective in reducing rates of restenosis but are not superior to standard bare metal stents in terms of decreasing deaths, myocardial infarction or thrombosis. Drug-eluting stents evaluated contained sirolimus, paclitaxel, dexamethasone, zotarolimus, everolimus and tacrolimus.

Caveat

The review was unable to report outcomes uniformly across all-time points and for all outcomes for all drugs. Long-term efficacy and safety data have not yet been confirmed as few trials reported outcomes beyond one or two years.

Context

Coronary artery stents are small, tubular devices used to “scaffold” vessels open during percutaneous transluminal coronary angioplasty. Restenosis of vessels treated with stents is a problem; in order to reduce restenosis, stents that elute drugs over time have been developed. However, there is a need to assess their clinical benefit prior to recommending their use. The increased cost of drug-eluting stents and current lack of evidence of their cost-effectiveness means that various health funding agencies are limiting or regulating their use.

Cochrane Systematic Review

Greenhalgh J et al. Drug-eluting stents versus bare metal stents for angina or acute coronary syndromes. Cochrane Reviews 2010, Issue 3. Article No. CD004587. DOI: 10.1002/14651858.CD004587.pub2.

This review contains 47 studies involving 14,500 participants.

PEARLS No. 274, July 2010, written by Brian R McAvoy

PEARLS are succinct summaries of Cochrane Systematic Reviews for primary care practitioners – developed by the Cochrane Primary Care Field, New Zealand Branch of the Australasian Cochrane Centre at the Department of General Practice and Primary Health Care, University of Auckland and funded by the New Zealand Guidelines Group. New Zealanders can access the Cochrane Library free via www.nzgg.org.nz

PEARLS provide guidance on whether a treatment is effective or ineffective. PEARLS are prepared as an educational resource and do not replace clinician judgement in the management of individual cases. View PEARLS online at: www.nzdoctor.co.nz; www.nzgg.org.nz; www.cochranepriarycare.org