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

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