

End of the line for coronary surgery? Not yet!

¹GJ Cooper, ²MH Chamberlain

¹Consultant Cardiothoracic Surgeon, Sheffield Teaching Hospitals NHS Foundation Trust and Honorary Senior Clinical Lecturer, Sheffield University, ²Specialist Registrar in Cardiothoracic Surgery, Sheffield Teaching Hospitals NHS Foundation Trust

TITLE Feasibility and cost of treatment with drug eluting stents of surgical candidates with multi-vessel coronary disease

Correspondence to GJ Cooper,
Northern General Hospital, Sheffield
S5 7AU

AUTHORS Griffiths H, Bakhai A, West D et al.

tel. +44(0)114 271 4954

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fax. +44 (0)114 261 0351

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e-mail graham.cooper@sth.nhs.uk

LIST OF ABBREVIATIONS Arterial revascularisation therapy tudy (ARTS), coronary artery bypass graft (CABG)

DECLARATION OF INTERESTS No conflict of interests declared.

SUMMARY

A Retrospective analysis was performed on 209 patients who had undergone coronary artery bypass grafting for multi-vessel disease for the first time. Two experienced interventional cardiologists reviewed pre-operative angiograms to determine the feasibility and cost of treatment with drug eluting coronary artery stents in patients with multi-vessel disease who had undergone surgical revascularisation. Drug eluting stents have lower restenosis rates than bare metal stents and this has led to their wider use in complex multi-vessel coronary artery disease. Percutaneous revascularisation was deemed feasible in 158 (76%) cases and was anticipated to be complete in 138 (66%) patients and partial but acceptable in 19 (9.1%) cases. The mortality due to coronary artery bypass surgery was 0.5%. The total cost of coronary artery bypass surgery was €19,821 ± 1,964, including a 3% repeat revascularisation rate. The estimated cost for stenting was €17,266 ± 2,850. However, when one-year repeat revascularisation was modelled at a rate of 15% in the stent group, there was no significant cost saving from stenting.

SURGICAL OPINION

This is an important study, which attempts to answer a pertinent question. The findings demonstrate that the initial cost benefit of stenting is removed when the costs of repeat revascularisation required in the stent group are added to the total costs. This is based on a 15% repeat revascularisation rate in the stent group. This may be underestimated, as significant long-term follow-up data for drug-eluting stents is not yet available. The study fails completely to address the clinical outcomes. We are given

no assessment of the procedural risk for stenting. In earlier trials treating less complex patients, this has been the same as coronary artery bypass surgery. In this cohort of patients it may be higher.

Until the results of ongoing tests of these two treatments are available, there is no clear clinical or economic mandate for the routine use of stenting in patients with complex multi-vessel coronary heart disease.

EDITOR'S COMMENT

The conclusion of this study depends on hypothetical data, and while the pendulum may be swinging from CABG to percutaneous therapy, the surgical commentators rightly point out that more (and better) data is needed. An important question is whether CABG or percutaneous therapy gives the best results in these patients. The ARTS, involving 1,205 patients, has become available and showed no difference in five-year mortality between these treatments (though adverse cardiac and cardiovascular events were more common following repeat percutaneous revascularisation). Other ongoing studies should give more clinical and cost information, but now is not the time to abandon surgery altogether.

(See: Serruys PW et al. *J Am Coll Cardiol* 2005; **46**:575–81.)

NOTE

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