Clinical Guidelines for the Use of Drug Eluting Coronary Artery Stents in Public Hospitals in NSW

Availability

There are currently several types of drug eluting stent available in Australia.

Safety

The Medical Services Advisory Committee (MSAC) report on Drug Eluting Stents (November, 2004)[1] found that based on current evidence, drug eluting stents are as safe as bare metal stents for the treatment of de novo atherosclerotic lesions of the coronary arteries.

Indications

1. The MSAC report (2004)[1] concluded that based on current evidence, drug eluting stents (DES) should be considered for the following subsets of patients:

   - Patients with Diabetes
   - Lesions greater than 18mm in length
   - Vessels less than 2.5mm in diameter

   These recommendations were confirmed in a review published by Patrick Serruys[2] and reflect the Victorian Department of Human Services Policy for the use of drug eluting stents in public patients[3,4].

2. In addition, there is mounting evidence since publication of the MSAC report in 2004 that patients with in-stent stenosis should be considered for a DES[5]. Drug eluting stents have been found to be superior to balloon angioplasty in reducing rates of recurrent restenosis[2,6,7].

3. The American College Cardiology/American Heart Association (ACC/AHA) update for Percutaneous Coronary Intervention (2005) states that DES have not undergone evaluation for all clinical situations and should be considered for use in anatomic settings in which the usefulness, effectiveness and safety have not been fully documented in published trials[8]. Based on the ACC/AHA recommendation and the Victorian Department of Human Services Policy[3] the Greater Metropolitan Clinical Taskforce (GMCT) Cardiac Services Network believes that patients with ostial and bifurcation lesions should be considered for a DES.

Bifurcation lesions are associated with high rates of restenosis[9], especially if stents are placed in both the main vessel and side branch. The most effective technique for treating bifurcation lesions remains undetermined[2] but registry evidence and expert opinion suggest that lower restenosis rates may be obtained with a DES.

Ostial lesions have a similarly high rate of restenosis[10] associated with significant morbidity and mortality. Registry evidence and expert opinion suggest restenosis rates may be reduced following implantation with a DES.

Contraindications

Early cessation of antiplatelet therapy has been identified as a significant cause of late in-stent thrombosis in patients receiving a DES[10]. Reasons for premature discontinuation of antiplatelet therapy include surgery, intolerance, complications and poor compliance. Patients should be carefully assessed prior to DES implantation for risk of thrombosis, including early cessation of therapy.

Recommendations

Based on a review of current evidence, the following subsets of patients should be considered for implant of a DES:

- Diabetics
- Lesions greater than 18mm in length
- Vessels less than 2.5mm in diameter
- In-stent restenosis
- Bifurcation or ostial lesions

The GMCT Cardiac Coordinating Committee believes that adoption of these recommendations would result in up to 30-40% of patients undergoing stent implantation receiving a DES. Records of indications for DES selection should be kept by implant centres to maintain adequate accountability for use.

The decision to implant a drug eluting stent must be a clinical judgement based on individual patient assessment and the complexity of each case.

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References

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