

Title	Drug-eluting balloon (DEB) for coronary heart disease – an update
Agency	MaHTAS, Health Technology Assessment Section, Medical Development Division, Ministry of Health Malaysia Level 4, Block E1, Parcel E, Precinct 1, Federal Government Administrative Center, 62590 Putrajaya, Malaysia Tel: +603 88831229, Fax: +603 88831230; htamalaysia@moh.gov.my, www.moh.gov.my
Reference	Technology Review Report – 009/2012, online: http://www.moh.gov.my/technology_reviews/200

Aim

To determine the safety, efficacy/effectiveness and cost-effectiveness of drug eluting balloon (DEB) as a treatment option for coronary heart disease.

Conclusions and results

A guideline and nine primary studies were included in this review. The studies included consisted of four randomised controlled trials (RCT) and five non-randomised single arm trials.

There was limited good level of evidence of short term outcome which supports that the treatment of coronary in-stent restenosis with the paclitaxel-coated balloon reduce the rate of restenosis when compared to non-drug-eluting balloon. Limited good level of evidence also showed that the paclitaxel-coated balloon was at least as efficacious and as well tolerated as the paclitaxel-coated stent.

As for small coronary vessels, there was limited fair level evidence which suggests that paclitaxel-coated balloons are efficacious for small coronary vessels.

Limited fair level evidence suggests that bifurcation lesion may also benefit from a DEB to reduce the incidence of restenosis.

Only one DEB is CE marked. The limited evidence showed that the adverse events associated with coated drug eluting balloon did not exceed the adverse events associated with non-coated balloons or paclitaxel-eluting stents.

The limited evidence suggested that paclitaxel-eluting balloons are associated with cost-savings when compared to paclitaxel-eluting stents

Methods

The literature was searched through electronic databases which included Medline, Cochrane Library via Ovid, PubMed and general databases such as Google Scholar.

The search strategy used terms either singularly or in various combinations: (coronary stenosis OR coronary artery stenosis OR vascular restenosis OR coronary diseases OR myocardial ischaemia), (drug eluting balloon OR DEB) and drug eluting stents.

In addition, cross-referencing of the articles retrieved was also carried out. Relevant articles were critically appraised and evidence graded using US / Canadian Preventive Services Task Force criteria.

Further research/reviews required

Further research to inform on long term outcomes is required.

Written by

Izzuna MMG, MaHTAS, Malaysia