



Title	Intraoperative Transoesophageal Echocardiography – May 2002
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Aim

To assess the safety, effectiveness, and cost effectiveness of intraoperative TOE for the monitoring of cardiac function during closed heart surgery, open heart surgery, and other surgery, and under what circumstances public funding should be supported for the procedure.

Conclusions and results

Safety: The semi-invasive procedure has a small but definite risk. There are reports of probe-related complications, such as thermal or pressure injuries, compression of the aorta or trachea, and procedure-related adverse events involving injury to the cardiovascular, pulmonary, and gastrointestinal systems, but the incidence of such events are uncertain. The incidence of gastro-esophageal injury in unanesthetized patients is estimated at 1 in 20 000. The incidence is uncertain in anesthetized patients, but is thought to be higher.

Effectiveness: The diagnostic accuracy of TOE in the outpatient setting was not reviewed in this evaluation. Intraoperative TOE may be useful for detecting endocarditis, abscesses associated with endocarditis, coronary artery stenosis, and left atrial thrombi, and changes in cardiac function. The effectiveness of TOE as a monitoring intervention during surgery on clinical management and patient outcomes was also assessed. Evidence identified from less than ideal study designs suggested that the use of intraoperative TOE may result in changes to the preoperative surgical plans of patients during cardiac surgery. There was no evidence to date ideally designed to assess whether the use of intraoperative TOE benefits the patient in terms of reduced mortality or morbidity.

Cost effectiveness: Studies from the USA indicate that the use of intraoperative TOE during cardiac valve surgery is cost effective due to revisions in surgical management which prevent the need for reoperation later. However, the data were insufficient to assess whether the use of intraoperative TOE is cost effective in the Australian setting.

Recommendations

There is limited evidence of the safety, effectiveness, and cost effectiveness of intraoperative transoesophageal echocardiography. MSAC recommends that public funding for this procedure should be supported on an interim basis and restricted to intraoperative assessment of cardiac valve competence following valve replacement or repair. The provision of funding should be reconsidered no later than June 2005 to ascertain whether further additional evidence has become available which supports continued funding.

Methods

MSAC conducted a systematic review of the biomedical literature (Cochrane Library, EBM-Reviews-ACP Journal Club, MEDLINE, PreMedline, Current Contents, Biological Abstracts, and PsychINFO) from commencement to November 2001. These sources were searched to identify studies examining the accuracy of intraoperative TOE in detecting changes in cardiac function and the effect of intraoperative TOE on patient management and patient outcomes.