



Title	Double-Balloon Enteroscopy
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Aim

To assess the safety, effectiveness, and cost effectiveness of double-balloon enteroscopy (DBE) in obscure gastrointestinal bleeding or suspected small bowel disease relative to laparotomy with or without intraoperative enteroscopy.

Conclusions and results

Safety: Fourteen uncontrolled case series and 4 case reports addressed the safety of DBE. Major complications, eg, perforation and sepsis, were reported in less than 1% of patients. No deaths were reported. Pancreatitis was the most common cause of major complication, most of which was resolved by conservative therapy. Minor complications, eg, abdominal pain and sore throat, were experienced in 7.2% of procedures. No studies comparing the relative safety of DBE against the comparative procedures of laparotomy, with or without intraoperative enteroscopy, were identified. Without direct comparative data, it is not possible to conclude that DBE is as safe as, or safer than, the comparators. However, given DBE's less invasive nature, fewer complications are likely to arise.

Effectiveness: Effectiveness outcomes of DBE were reported in 11 uncontrolled case series. Ten case series reported the success of DBE as a therapeutic intervention, ranging from 77% to 100%, with 6 studies reporting 100% success in the treatments used. All 11 case series reported biopsy or diagnostic yield. Transfusion requirement after DBE was poorly reported, with only 1 study reporting a 70% reduction in the number of patients requiring transfusion after DBE. As no data compared DBE with laparotomy, with or without intraoperative enteroscopy, no conclusions can be drawn on the relative effectiveness of the procedure. Based on the evidence identified, DBE appears to be effective at providing therapies to small bowel lesions.

Cost effectiveness: As there was no comparative evidence on DBE, it was not possible to determine if the procedure was as effective as, or more effective than, the com-

parators. A financial incidence analysis was performed, which indicated that although DBE would be more costly to the Commonwealth relative to the comparators, there were likely to be savings to the Australian healthcare system overall.

Recommendations

Double-balloon enteroscopy (DBE) is a safe, minimally invasive technique to endoscopically examine the small intestine, concurrently allowing biopsy and certain therapeutic procedures. While there are no direct comparative data, DBE is likely to be safer than the most appropriate alternative, intraoperative enteroscopy. DBE is effective in allowing enteroscopic assessment and some treatment of the entire small intestine. Although more costly to Medicare than intraoperative enteroscopy, DBE can potentially save costs for the entire health funding system. MSAC recommends public funding for DBE to diagnose and treat patients with obscure gastrointestinal bleeding. The Minister for Health and Ageing accepted this recommendation in 2007.

Methods

MEDLINE, EMBASE, the Cochrane Library, other biomedical databases, and HTA and other websites were searched (2001 to May 2006). Specific journals were hand searched and reference lists canvassed. Studies were included in the review using predetermined PICO selection criteria, and reasons for exclusion were documented. Study quality was appraised, data extracted in a standardized manner, and findings synthesized qualitatively.

Further research/reviews required

N/A