Enhanced recovery after surgery protocols - compliance and variations in practice during routine colorectal surgery
Ahmed J, Khan S, Lim M, Chandrasekaran TV, Macfie J

CRD summary
This review found significant variation in the components of, and compliance with, protocols to speed recovery from colorectal surgery in routine practice. Differing protocols produced similar clinical outcomes. High compliance seemed to be associated with a reduced length of hospital stay. The uncertain quality of the evidence and presence of possible confounding factors makes the reliability of both conclusions uncertain.

Authors' objectives
To review the literature on compliance with enhanced recovery after surgery (ERAS) protocols in patients who underwent colorectal surgery in routine clinical practice and to assess whether improved compliance was associated with a shorter stay in hospital.

Searching
The authors searched PubMed, EMBASE and Cochrane databases from January 1995 to March 2011. Search terms were reported. The search was limited to English language studies. Further studies were sought using the reference lists of relevant articles and the authors' own collections.

Study selection
Eligible studies had to report on compliance with ERAS protocols for patients who underwent colorectal surgery (open or laparoscopic). Randomised and non-randomised controlled trials were excluded because of the risk that their compliance rates might be higher than those observed in routine practice.

No specific definition of ERAS protocols was provided. The authors noted that interventions treated as part of an ERAS protocol at some centres might be considered routine practice at others. The included studies used a total of 19 different components (five preoperative, seven intraoperative and seven postoperative). Most included studies were performed in European countries but only one study was exclusively from the UK.

It appeared that two reviewers selected studies for the review.

Assessment of study quality
The authors did not report that they assessed study quality.

Data extraction
Data on length of stay, readmission rates and percentage compliance with individual components of ERAS protocols were extracted.

The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
A narrative synthesis was presented. Differences between studies were evident from tables.

Results of the review
Eleven studies with 5,747 participants (range 36 to 2,047) were included. The number of ERAS components used ranged from four to 14. Three studies included no preoperative components. Median length of hospital stay was reported in nine studies and ranged from two to eight days. One multinational study reported that median length of stay ranged from seven to 11 days. Readmission rates ranged from 0 to 22% (eight studies).

The authors stated that in four studies there was an association between improved compliance and reduced length of hospital stay. However, the shortest length of stay was associated with the highest readmission rate. Results on
compliance with different ERAS components were presented. It was unclear how compliance was measured. In general compliance was lowest during the postoperative period.

There were several discrepancies between text and tables in reporting the results.

Authors’ conclusions
There was significant variation in the components of, and compliance with, ERAS protocols in routine practice. However, differing protocols produced similar clinical outcomes. High compliance seemed to be associated with a reduced length of hospital stay.

CRD commentary
The review objectives were clear. Restricting the review to observational studies was appropriate for collecting data that corresponded as closely as possible to routine clinical practice. However, when results from such studies were compared it was difficult to be sure whether differences were due to differences in the factors of interest or other (confounding) factors. Relevant sources were searched, but the restriction to English meant that some studies could have been missed. Publication bias was not assessed. It appeared that two reviewers were involved in study selection but other review methods were not reported. Quality of included studies was not assessed and only limited details were reported, which made the evidence base difficult to evaluate.

A narrative synthesis was appropriate to the objectives of the review. The authors' conclusion that differing protocols produced similar outcomes broadly reflected the evidence presented while the suggestion of a relationship between compliance and length of stay may be overstated. However, the uncertain quality of the evidence and presence of possible confounding factors makes the reliability of both conclusions uncertain.

Implications of the review for practice and research
Practice: The authors stated that several interventions could facilitate implementation of ERAS protocols, including use of specific wards, management by selected anaesthetists and designation of an individual to co-ordinate the pathway. These implications did not follow directly from the results of the review.

Research: The authors did not state any implications for research.

Funding
Not stated.

Bibliographic details

DOI
10.1111/j.1463-1318.2011.02856.x

Original Paper URL

Indexing Status
Subject indexing assigned by CRD

MeSH
Colorectal Surgery; Recovery of Function; Clinical Protocols; Humans; Guideline Adherence

AccessionNumber
12012042857

Date bibliographic record published
29/10/2012
Date abstract record published
01/11/2012

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.