Early versus delayed oral fluids and food for reducing complications after major abdominal gynaecologic surgery

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RHL summary

Key findings

- Early postoperative feeding was associated with faster recovery of bowel function, lower rates of infectious complications, shorter hospital stay, and higher women satisfaction.
- No difference in postoperative GIT complication such as nausea, vomiting, ileus and abdominal distension between early and delayed feeding groups.
- Early feeding group resumed on solid diet 1½ days sooner than delayed feeding group, with reduction in length of hospital stay by one day.
- Satisfaction with feeding schedule was better in early feeding group.

Evidence included in this review

Five studies involving 631 women across 4 countries, including the United States (1), Canada (1), Thailand (1) and Italy (2).

Quality assessment

All studies were randomised controlled trials with consistent outcome data. The main limitation in study methodology was with lack of blinding with high risk of performance bias. Overall rating of evidence was of moderate quality for subjective outcomes and high quality for objective outcomes.

Clinical implications

Delayed postoperative feeding after major abdominal surgeries is a surgical dogma without scientific basis. Early postoperative feeding within 24 hours is safe, with earlier return of bowel function, lower rates of infectious complications, shorter hospital stay, and better women satisfaction. With comparable risk of postoperative GIT complication, faster return to solid diet and shorter hospital stay, the policy is recommended after major abdominal surgeries.

Further research

Further research should examine and provide additional meaningful information on cost effectiveness, participant satisfaction and preference, and other physiological changes (fluid and electrolyte balance, tissue
response, wound healing) under different postoperative feeding schedules.

Cochrane review


Abstract

This is an updated version of the original Cochrane review published in 2007. Traditionally, after major abdominal gynaecologic surgery postoperative oral intake is withheld until the return of bowel function. There has been concern that early oral intake would result in vomiting and severe paralytic ileus with subsequent aspiration pneumonia, wound dehiscence, and anastomotic leakage. However, evidence-based clinical studies suggest that there may be benefits from early postoperative oral intake.

To assess the effects of early versus delayed (traditional) initiation of oral intake of food and fluids after major abdominal gynaecologic surgery.

We searched the Menstrual Disorders and Subfertility Group's Specialised Register, the Cochrane Central Register of Controlled Trials (CENTRAL), electronic databases (MEDLINE, EMBASE, CINAHL), and the citation lists of relevant publications. The most recent search was conducted 1 April 2014. We also searched a registry for ongoing trials ([www.clinicaltrials.gov](http://www.clinicaltrials.gov)) on 13 May 2014.

Randomised controlled trials (RCTs) were eligible that compared the effect of early versus delayed initiation of oral intake of food and fluids after major abdominal gynaecologic surgery. Early feeding was defined as oral intake of fluids or food within 24 hours post-surgery regardless of the return of bowel function. Delayed feeding was defined as oral intake after 24 hours post-surgery and only after signs of postoperative ileus resolution.

Two review authors selected studies, assessed study quality and extracted the data. For dichotomous data, we calculated the risk ratio (RR) with a 95% confidence interval (CI). We examined continuous data using the mean difference (MD) and a 95% CI. We tested for heterogeneity between the results of different studies using a forest plot of the meta-analysis, the statistical tests of homogeneity of 2 x 2 tables and the I² value. We assessed the quality of the evidence using GRADE methods.

Rates of developing postoperative ileus were comparable between study groups (RR 0.47, 95% CI 0.17 to 1.29, P = 0.14, 3 RCTs, 279 women, I² = 0%, moderate-quality evidence). When we considered the rates of nausea or vomiting or both, there was no evidence of a difference between the study groups (RR 1.03, 95% CI 0.64 to 1.67, P = 0.90, 4 RCTs, 484 women, I² = 73%, moderate-quality evidence). There was no evidence of a difference between the study groups in abdominal distension (RR 1.07, 95% CI 0.77 to 1.47, 2 RCTs, 301 women, P = 0%) or a need for postoperative nasogastric tube placement (RR 0.48, 95% CI 0.13 to 1.80, 1 RCT, 195 women). Early feeding was associated with shorter time to the presence of bowel sound (MD -0.32 days, 95% CI -0.61 to -0.03, 3 RCTs, 338 women, I² = 23%, moderate-quality evidence) and faster onset of flatus (MD -0.21 days, 95% CI -0.40 to -0.01, P = 0.04, 3 RCTs, 444 women, I² = 23%, moderate-quality evidence). In addition, women in the early feeding group resumed a solid diet sooner (MD -1.47 days, 95% CI -2.26 to -0.68, P = 0.0003, 2 RCTs, 301 women, I² = 92%, moderate-quality evidence). There was no evidence of a difference in time to the first passage of stool between the two study groups (MD -0.25 days, 95% CI -0.58 to 0.09, P = 0.15, 2 RCTs, 249 women, I² = 0%, moderate-quality evidence). Hospital stay was shorter in the early feeding group (MD -0.92 days, 95% CI -1.53 to -0.31, P = 0.003, 4 RCTs, 484 women, I² = 68%, moderate-quality evidence). Infectious complications were less
common in the early feeding group (RR 0.20, 95% CI 0.05 to 0.73, P = 0.02, 2 RCTs, 183 women, I² = 0%, high-quality evidence). In one study, the satisfaction score was significantly higher in the early feeding group (MD 11.10, 95% CI 6.68 to 15.52, P < 0.00001, 143 women, moderate-quality evidence).

Early postoperative feeding after major abdominal gynaecologic surgery for either benign or malignant conditions appeared to be safe without increased gastrointestinal morbidities or other postoperative complications. The benefits of this approach include faster recovery of bowel function, lower rates of infectious complications, shorter hospital stay, and higher satisfaction.

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