



A STUDY OF EARLY ORAL FEEDING WITH TRADITIONAL ORAL FEEDING IN EMERGENCY GASTROINTESTINAL SURGERY

Plastic Surgery

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ABSTRACT

Introduction: Traditionally after abdominal surgery, the passage of flatus or bowel movement is considered the clinical evidence for starting an oral diet. The resolution of post-operative ileus defined by the passage of flatus usually occurs within five days. **Aims:** To compare the effect of early oral feeding with traditional delayed oral feeding on accountability, benefits, and gastrointestinal function in patient who have undergone gastrointestinal surgery. **Materials And Methods:** The present study was a Prospective, randomized, comparative study. This Study was conducted from Jan 2023- Dec 2023 at Department of General Surgery, Burdwan Medical College and Hospital, Burdwan. **Result:** In our study, most of the patients had Duodenal Perforation Diagnosis [21(43.8%)], 4(8.3%) patients had Colon Cancer Diagnosis, 9(18.8%) patients had Intestinal obstruction Diagnosis, 7(14.6%) patients had ileal perforation Diagnosis and 7(14.6%) patients had Peptic Perforation Diagnosis. **Conclusion:** We concluded that early oral feeding after gastrointestinal surgery is safe and can be tolerated by the majority of patients. Thus, it may become a routine feature of postoperative management in these patients.

KEYWORDS

Early oral feeding, post-operative ileus, Gastrointestinal Surgery and abdominal surgery

INTRODUCTION

Traditionally after abdominal surgery, the passage of flatus or bowel movement is considered the clinical evidence for starting an oral diet. The resolution of post-operative ileus defined by the passage of flatus usually occurs within five days. Post-operative dysmotility predominantly affects the stomach and colon, with the small bowel recovering normal function 4-8 hours after laparotomy. Then the stomach is decompressed with a nasogastric tube and intravenous fluids are given, with oral feeding being introduced as the gastric dysmotility resolves. The rationale of nil by mouth is to prevent post-operative nausea and vomiting and to protect the anastomosis, giving it time to heal before being stressed by food. However, it is unclear for how long the deferral of enteral feeding is beneficial.¹ Early feeding improves the outcome in patients with trauma and burns, although few studies have examined its use after lower gastrointestinal (LGI) anastomosis.²

Early enteral nutrition (nasogastric tube) or oral feeding appears to be a useful and safe therapeutic alternative for the post-operative management of patients undergoing gastrointestinal surgery in emergency. However, careful selection of patients is necessary in order to obtain the greatest benefit of early oral feeding in these patients. In this regard, the role of early oral feeding in gastrointestinal surgery needs to be clarified by controlled randomized trials.

Even today, many surgeons do not believe in the effects of early oral feeding in the treatment of gastrointestinal surgery patients. Due to the lack of interest in using early oral feeding and so there is need for a trial study in this regard; this study will be aimed to compare the outcome of early oral feeding and traditional oral feeding in patients who underwent gastrointestinal surgery in emergency.³

Aims And Objective

Aim: To compare the effect of early oral feeding with traditional delayed oral feeding on accountability, benefits, and gastrointestinal function in patient who have undergone gastrointestinal surgery.

Objectives:

Primary objectives-Comparing the effect of early oral feeding and traditional delayed oral feeding in respect to:

- 1) Anastomotic leakage
- 2) Peritonitis
- 3) Intra-abdominal abscess

Secondary Objectives-

- 1) Hospital stay
- 2) Wound infection
- 3) Post-operative pain

MATERIALS AND METHODS

A Prospective, randomized, comparative study conducted from January 2023 - December 2023 at Department of General Surgery, Burdwan Medical College with 100 patients presenting undergone gastrointestinal surgery

Study population was randomly assigned into two groups in a consecutive manner as either the EOF (Early oral feeding) group or TOF (traditional oral feeding) group. In both group effort was made so that no significant difference occur in term of age, sex, place of residence, operation site, nausea, vomiting & ileus between two groups. Both groups were received similar prophylaxis antibiotics and anaesthetic drugs. Indications of anastomosis and surgery were approximately similar between two groups. The operation techniques and suture ties were almost similar in all patients. ANGT (Nasogastric Tube) was placed in all patients during the operation.

RESULT AND DISCUSSION

In our study, male population [31(64.6%)] was higher than the female population [17(35.4%)]. 20 (41.7%) patients were 21-30 years old, 14(29.2%) patients were 31-40 years old, 5(10.4%) patients were 41-50 years old and 9(18.8%) patients were >50 years old. The mean Age (mean± s.d.) of patients was 37.2292± 11.9809 years.

Petrelli NJ et al (2002) found that 16 had nausea or emesis, and 8 required readmission for postoperative complications (small-bowel obstruction [4 patients], wound dehiscence [1 patient], abdominal pain [1 patient], and anastomotic leak [2 patients]).

We found that, 48 (100.0%) patients had pain, 27 (56.3%) patients had N/V, 34 (70.8%) patients had Distension, 11 (22.9%) patients had Constipation, 25(52.1%) patients had Fever, 37 (77.1%) patients were Rigidity, 10 (20.8%) patients had Lump, 36 (75.0%) patients had Liver dullness, 6 (12.5%) patients had Ileus, 5 (10.4%) patients had Fecal fistula, 10 (20.8%) patients had WI and 41 (85.4%) patients had Tolerance.

In our study, most of the patients had Duodenal Perforation Diagnosis [21(43.8%)], 4(8.3%) patients had Colon Carcinoma Diagnosis, 9(18.8%) patients had intestinal obstruction Diagnosis, 7 (14.6%) patients had Ileal Perforation Diagnosis and 7(14.6%) patients had Peptic Perforation Diagnosis (Table 1).

Our study showed that 20(41.7%) patients had GA anesthesia and 28(58.3%) patients had GA+EA anesthesia.

It was found that most of the patients had Grahms patch perforation repair surgery [21 (43.8%)], rest 9 (18.8%) patients had Ileal perforation repair surgery, 7 (14.6%) patients had Ileoileal anastomosis surgery, 4 (8.3%) patients had ileo-tranverse anastomosis surgery and 7(14.6%) patients had peptic perforation Repair surgery (Table 2).

We found that most of the patients' duration of surgery was 1 hour [24(50.0%)], 14(29.2%) patients' duration of surgery was 2-hour, 9(16.7%) patients' duration of surgery was 3 hours and 2(4.2%) patients' duration of surgery was 4 hours.

Ng WQ et al⁵ (2006) reviewed fifteen studies comprising 1352 patients all studies concluded early feeding was safe, based on complications rates. Total complications were 12-5% (range 0– 25%) for 935 early feeding patients, with no increased risk of anastomotic leak, aspiration pneumonia, or bowel obstruction. For all studies an average of 86% patients (range 73–100%) tolerated early feeding.

In our study, 24(50.0%) patients were in Delay group and 24(50.0%) patients were in Early group.

We examined the mean SOT (mean± s.d.) of patients was 52.8750± 14.9262. The mean Duration of surgery (mean± s.d.) of patients was 1.7500± .8873hrs. The mean Hb% (mean± s.d.) of patients was 11.3333± 1.9606. The mean LOHS (mean± s.d.) of patients was 15.5000± 6.6204.

It was found that in Delay Group, 9(37.5%) patients were Female and 15(62.5%) patients were male. In Early Group, 8(33.3%) patients were Female and 16(66.7%) patients were male. It was not statistically significant (p=0.7628). We also found that in Delay Group, 7(29.2%) patients were 21-30years old, 6(25.0%) patients were 31-40 years old, 4(16.7%) patients were 41-50years old and 7(29.2%) patients were >50years old. In Early Group, 13(54.2%) patients were 21- 30years old, 8(33.3%) patients were 31-40 years old, 1(4.2%) patient were 41-50years old and 2(8.3%) patients were >50years old. It was not statistically significant (p=0.0834).

In our study, in both groups equal number of patients were present. In Delay Group, 24 (100.0%) patients had pain and in Early Group, 24(100.0%) patients had pain. We found that in Delay Group, 13(45.8%) patients had N/V and in Early Group, 14(58.3%) patients had N/V which was not statistically significant (p=0.7710).

Ashjaei B et al⁶ (2019) found that abdominal distension occurred in 4 patients in group 1 and 3 patients in group 2. Fever occurred in 2 patients in group 1 and 1 patient in group 2 within the first 24 hours and it occurred in 13 and 17 patients, respectively, within 48 hours.

It was found that in Delay Group, most of the patients had GA+EA anesthesia [15(62.5%)] and 9(37.5%) patients had GA anesthesia. In Early Group, 11(45.8%) patients had GA anesthesia and 13(54.2%) patients had GA+EA anesthesia. This was not statistically significant (p=0.5581).

We found that in Delay Group, 10(41.7%) patients were done Grahms patch duodenal perforation repair surgery, 5(20.8%) patients were done Ileiolealanstamosis surgery, 4(16.7%) patients were done Ileal perforation repair surgery, 2(8.3%) patients were done ileo-tranverse anastomosis surgery and 3(12.5%) patients were done Grahms Peptic perforation Repair surgery. In Early Group, 11(45.8%) patients were done Grahms patch perforation repair surgery, 4(16.7%) patients were done Ileiolealanstamosis surgery, 3(12.5%) patients were done Ileal perforation surgery, 2(8.3%) patients were done ileo-tranverse anastomosis surgery and 4(16.7%) patients were done Grahms peptic perforation Repair surgery. It was not statistically significant (p=0.9787).

We observed that in Delay Group, higher number of patients' [10(41.7%)] duration of surgery was 1 hour, 9(37.5%) patients' duration of surgery was 2 hours and 5(20.8%) patients' duration of surgery was 3 hours. In Early Group, 14(58.3%) patients' duration of surgery was 1 hour, 5(20.8%) patients' duration of surgery was 2 hours, 3(12.5%) patients' duration of surgery was 3 hours and 2(8.3%) patients' duration of surgery was 4 hours. This was not statistically significant (p=0.2299).

We also found that in Delay Group, 3(12.5%) patients had Ileus and in Early Group, 3(12.5%) patients had Ileus which was not statistically significant (p=1.0000). In Delay Group, 3(12.5%) patients had Fecal fistula and in Early Group, 2(8.3%) patients had Fecal fistula which was not statistically significant (p=0.6365). In Delay Group, 7(29.2%) patients had WI and in Early Group, 3(12.5%) patients had WI which was not statistically significant (p=0.1551). In Delay Group,

21(87.5%) patients had Tolerance and In Early Group, 20(83.3%) patients had Tolerance which was also not statistically significant (p=0.6825).

It was found that the mean Age (mean± s.d.) of patients was higher [40.7500± 12.2306 years] in Delay Group compared to Early Group patients [33.7083± 10.8567 years] and this was statistically significant (p=0.0404).

In our study the mean SOT (mean± s.d.) of patients was higher in Delay Group [55.8333±12.5652] compared to Early Group patients [49.9167±16.7070] which was not statistically significant (p=0.1723).

We found that the mean Duration of surgery (mean± s.d.) of patients was higher in Delay Group [1.7917± .7790] compared to Early Group patients [1.7083±.9991] which was not statistically significant (p=0.7487).

It was found that the mean Hb% (mean± s.d.) of patients was higher in Early Group [11.7083±1.4885] compared to Delay Group patients [10.9583± 2.3121] which was not statistically significant (p=0.1881). We also found that the mean LOHS (mean± s.d.) of patients was higher in Delay Group [17.4167± 6.3719] compared to Early Group patients [13.5833± 6.4263] which was statistically significant (p=0.0436).

CONCLUSION

- In our study, 20(41.7%) patients were 21-30years old, 14(29.2%) patients were 31-40 years old, 5(10.4%) patients were 41-50years old and 9(18.8%) patients were >50years old.
- In our study, 48(100.0%) patients had pain, 27(56.3%) patients had N/V, 34(70.8%) patients had Distension, 11(22.9%) patients had Constipation, 25(52.1%) patients had Fever, 37(77.1%) patients were Rigidity, 10(20.8%) patients had Lump, 36(75.0%) patients had Liver dullness, 6(12.5%) patients had Ileus, 5(10.4%) patients had Fecal fistula, 10(20.8%) patients had WI and 41(85.4%) patients had Tolerance in emergency gastrointestinal surgery.
- In our study, 21(43.8%) patients had Duodenal Perforation Diagnosis, 4(8.3%) patients had Colon Carcinoma Diagnosis, 9(18.8%) patients had intestinal obstruction Diagnosis, 7(14.6%) patients had Ileal Perforation Diagnosis and 7(14.6%) patients had Peptic Perforation Diagnosis.
- In our study, 21(43.8%) patients were done Grahms patch in duodenal perforation repair surgery, 9(18.8%) patients were done Ileiolealanstamosis repair surgery, 7(14.6%) patients were done ileal perforation repair surgery, 4(8.3%) patients were done ileo-tranverse anastomosis surgery and 7(14.6%) patients were done Grahms Peptic perforation Repair surgery.
- Symptoms like pain, nausea & vomiting, Distension, Constipation, Fever, RIGIDITY, Lump and LIVER DULLNESS were not significantly associated with early and late oral feeding in emergency gastrointestinal surgery.
- Fecal fistula was more in delay oral feeding compared to early oral feeding in emergency gastrointestinal surgery though it was not statistically significant.
- We found that wound Infection was more in delay oral feeding compared to early oral feeding though it was not statistically significant.
- It was showed that tolerance was not significantly associated with early and late oral feeding.
- We also found that duration of surgery was not significantly difference in early and late oral feeding.
- Mean length of Hospital stay was higher in delay oral feeding compared to early oral feeding which was statistically significant.
- Early postoperative oral intake results in a decreased length of hospitalization and is well tolerated when compared with traditional dietary management in patients undergoing emergency gastrointestinal surgery.
- We concluded that early oral feeding after emergency gastrointestinal surgery is safe and can be tolerated by the majority of patients. Thus, it may become a routine feature of postoperative management in these patients.

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