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Early Feeding is Feasible after Emergency Gastrointestinal Surgery

Dr. Srishti Baurasi[1], Dr. Mrs. Rajshree Mukhiya[2], Dr. Satyendra Prasad Mukhiya[3]

[1]Resident (JR3), R. D. Gardi Medical College, Ujjain

[2]Professor, Department of General Surgery, R. D. Gardi Medical College, Ujjain

[3]Professor, Department of General Surgery, R. D. Gardi Medical College, Ujjain

Abstract: ***This study was undertaken to assess the feasibility of early feeding in patients that have undergone emergency gastrointestinal surgery. The study was done prospectively over seventy (70) patients that underwent emergency bowel resection and /or anastomosis from JUNE 2019 to MAY 2020 at our institute.***

Keywords: Feeding, Gastrointestinal Surgery

1. Introduction

Nutritional support plays important roles in wound healing and post operative recovery, and poor nutritional status is strongly associated with delayed wound healing and longer hospital stays after surgery.

In particular, after emergency gastrointestinal surgery, nutritional status is impaired and basal energy expenditure is elevated, and thus nutritional support is of considerable importance.

Several reports have emphasized that early enteral feeding should be started as soon as possible after resuscitation because the immunomodulatory effect of enteral feeding could assist recovery.

Furthermore, enhanced recovery after surgery has been shown to improve postoperative recovery after elective gastrointestinal surgery.

However, patients that undergo emergency gastrointestinal surgery have an edematous or ischemic bowel, and are at high risk of complications, such as ileus, obstruction, or anastomotic failure.

Furthermore, relatively few reports have been issued on the safety of early feeding after emergency surgery.

Thus, this study was undertaken to assess the feasibility of early feeding in patient after emergency gastrointestinal surgery.

2. Materials and Methods

This study was based on a prospective study over 70 patients that underwent emergency gastrointestinal surgery from JUNE 2019 to MAY 2020.

Patient Selection:
Patients considered for inclusion in this study have all undergone ileostomy/colostomy, bowel resection and anastomosis or primary repair with traumatic or non traumatic intestinal perforation.

Patients that underwent appendectomy, cholecystectomy, or adhesiolysis without bowel resection and anastomosis were excluded.

Table 1: Causes of Operation

Cause	Group E [N=30]	Group L [N=40]
Obstruction	5	7
Strangulation	3	3
Perforation	18	25
Appendicitis with [Ileostomy]	2	2
Trauma	2	3
Bleeding	0	0

Table 2: Sites of Operation

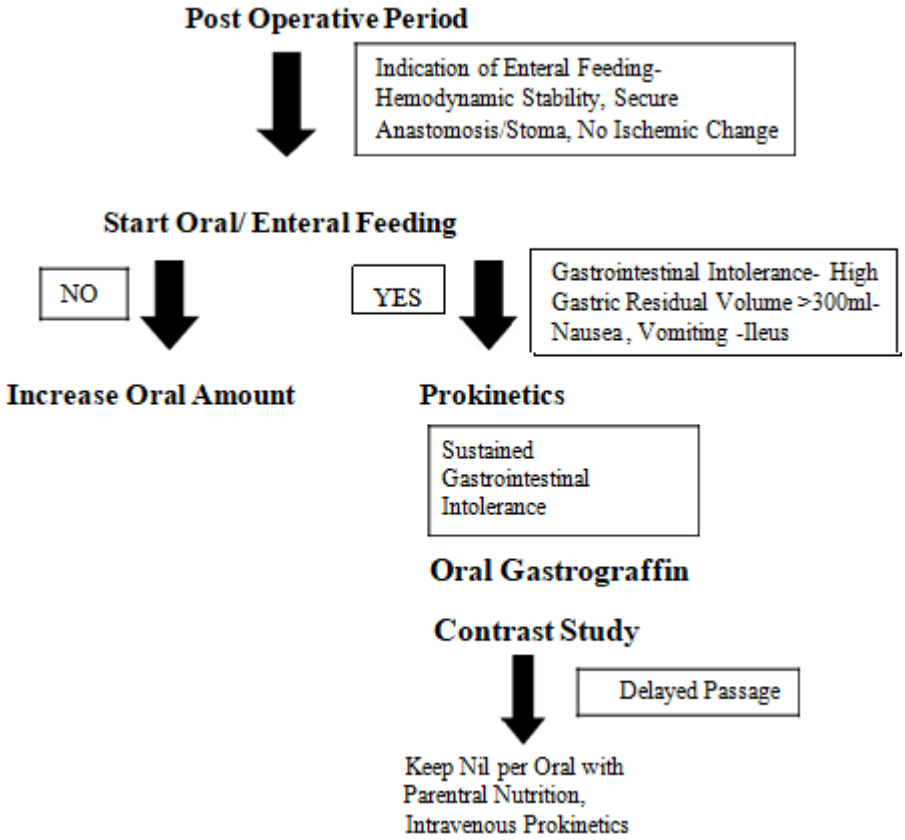
Site	Group E[N=30]	Group L[N=40]
Stomach	11	20
Duodenum	1	4
Small Bowel	15	15
Colon	3	1

Table 3: Operation Types

Operation Type	Group E [N=30]	Group L [N=40]
Small Bowel Resection and Anastomosis	10	13
Colon Resection and Anastomosis	1	3
Bypass Surgery	0	1
Colon Resection and Colostomy	2	0
Small Bowel Resection And Ileostomy	15	22
Gastrectomy	2	1

Table 4: Complication after Emergency Surgery

Complication	Group E[N=30]	Group L[N=40]
Wound Problems	9	11
Postoperative Ileus	3	0
Abdominal Pain	6	5
Diarrhea	0	1
Pulmonary Complication	8	13
Sepsis	2	7
Intra Abdominal Abscess	0	0
Anastomotic Leakage	2	3



3. Result

70 patients were considered for this study.

There were 49 males and 21 females, and their median age was 64 years (range, 16 – 98 years).

The most common cause of surgery was bowel perforation, followed by intestinal obstruction.

The small bowel was the most common operation site, followed by the colon.

The most common type of surgery was segmental resection, with primary anastomosis of small bowel.

Oral feeding was performed on 10 patients, while tube feeding was performed on 7 patients.

Amongst post operative complications, wound problems and sepsis were most common.

Pulmonary complications occurred among 8 patients, pleural effusion in 5 and pneumonia in 3 patients.

4. Discussion

The present study focused on the safety of early feeding after emergency gastrointestinal surgery in patients with relatively stable hemodynamic status and secure anastomosis.

The findings of this study suggest that early feeding is safe after emergency gastrointestinal surgery.

Furthermore, complication rates were similar between the early and late groups; nevertheless pulmonary complication rates were lower and length of stays in hospital and ICU were shorter in early feeding group.

Traditionally, enteral feeding is not started until bowel motility has recovered after elective surgery on the gastrointestinal tract, causing delays in enteral feeding after emergency surgery, compared with elective surgery.

Because patients that undergo emergency gastrointestinal surgery have an edematous or ischemic bowel, anastomosis healing is usually delayed, and this can result in anastomotic disruption or leakage.

On the other hand, poor enteral intake can lead to malnutrition or delayed bowel mucosa growth and increase postoperative morbidity and mortality.

Several studies have reported beneficial effects for early enteral feeding after gastrointestinal surgery, and demonstrated good tolerance to enteral feeding and reductions in septic morbidity.

Whenever bowel continuity is maintained after surgery, enteral feeding is preferred over parenteral nutrition according to several guidelines.

A previous report on early enteral feeding after emergency gastrointestinal surgery focused on patients with peritonitis.

However, most of the patients enrolled had a perforated gastric or duodenal ulcer, and thus, feeding materials were not passed through anastomotis sites because a nasogastric

or percutaneous jejunal tube that passed through anastosis was used for feeding.

5. Complications

Complications associated with early feeding such as abdominal pain, diarrhea, and postoperative ileus were investigated.

Although, complications developed in 5 of 12 patients in early feeding group, all recovered fully under conservative management.

As well, the majority of complications were wound problems, such as infection or seroma, and no differences were found between the two groups, with the exception of pulmonary complications.

In regards to pulmonary complications after emergency surgery, Barlow, et all. Demonstrated that operative morbidity was less common after major upper gastrointestinal surgery in patients that received early enteral nutrition.

In particular, chest infections were significantly less common in these patients.

Moore, et all., via meta analysis of high risk surgical patients, also found that early enteral feeding was associated with a lower incidence of pneumonia and other septic complications.

In accordance with previous studies, the present study showed that pulmonary complications were significantly less common in early feeding group.

It was also noted that after feeding had started, intravenous fluid intake was reduced, suggesting that early enteral feeding could reduce the risk of pleural effusion.

6. Conclusion

This study showed that complication rates were similar between early and late feeding groups after emergency gastrointestinal surgery.

Our results indicate that early enteral feeding after emergency gastrointestinal surgery does not increase complication rates, and thus, that early feeding after emergency gastrointestinal surgery is feasible in patients without severe shock or bowel anastomosis instability.

References

[1] Bisgaard T, Kehlet H. Early oral feeding after elective abdominal surgery--what are the issues? Nutrition. 2002;18:944–948
[2] Fearon KC, Luff R. The nutritional management of surgical patients: enhanced recovery after surgery. Proc Nutr Soc. 2003;62:807–811
[3] Giner M, Laviano A, Meguid MM, Gleason JR. In 1995 a correlation between malnutrition and poor outcome in critically ill patients still exists. Nutrition. 1996; 12:23–29.
[4] Pennington CR, Powell-Tuck J, Shaffer J. Review article: artificial nutritional support for improved patient care. Aliment Pharmacol Ther. 1995;9:471–481.