https://doi.org/10.29309/TPMJ/2023.30.05.7022

The Professional Medical Journal
www.theprofesional.com
2023, Volume, 30 Issue, 05

ORIGINAL ARTICLE

Comparison of late oral feeding with early oral feeding after stoma reversal.

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Article Citation: Siddique A, Masood A, Zeb M, Khattak SK, Khan AH, Ali N. Comparison of late oral feeding with early oral feeding after stoma reversal. Professional Med J 2023; 30(05):570-574. https://doi.org/10.29309/TPMJ/2023.30.05.7022

ABSTRACT… Objective: To compare early and late oral feeding after ileostomy closure in terms of postoperative anastomotic leakage. **Study Design:** Randomized Control Trial. **Setting:** Department of Surgery Unit, Leady Reading Hospital Peshawar. **Period:** July 2020 to January 2021. **Material & Methods:** All patients with stoma 226 (113 in each group) were observed. Patients were randomly divided into two categories. In the early postoperative period (within 24 hours of surgery), Group A permitted oral feeding. Group B who preserved "nil by mouth" for up to 72 hours during the post-operative phase. Patients were held null by mouth in the post-operative phase, while intravenous antibiotics and fluids were listed in both groups for up to the duration. In group A within 24 hours and in group B after 72 hours, 30 ml of liquid per hour was started orally. Follow-up was taken after the 7th day post-operative. The frequency of anastomotic leakage between the two groups was assessed and safety was defined based on anastomotic leakage. **Results:** The mean age in Group A was 42 years SD ± 6.94 for this analysis, while the mean age in Group B was 44 years SD +6.15. In 90 % of patients, more than Group A (early oral feeding) was safe, whereas Group B (late oral feeding) was safe in 86% of anastomotic leakage patients. **Conclusion:** Our research concludes that early oral feeding is better in terms of anastomotic leaks compared to late oral feeding after ileostomy closure.

Key words: Anastomosis Leak, Early Oral Feeding, Late Oral Feeding, Loop Ileostomy Reversal.

INTRODUCTION

Intestinal stoma is usually performed as component of other surgical intervention for small and large bowel pathologies. Of these temporary ileostomies are commonest stomas created for de functioning of the distal anastomotic site to minimize the chances of leak. As this research has not been performed the targeted population in recent years, it will include the current and revised information on the safety of early and late oral feeding in terms of post-operative anastomotic leakage following further ileostomy closure (reversal).[1] For their general practice and for analysis and recommendation, the findings of the study will be shared with other health practitioners and hospitals. Usually, ileostomy is reversed at 8 to 12 weeks, but if closure performed early, ileostomy related complications decrease. Intraperitoneal or extra peritoneal closure can be achieved by reversal of the loop stoma under local, spinal, or general anesthesia. Stoma closure involving wound infection / hematoma, leakage from anastomosis after reversal, small bowel obstruction at the site of ileostomy closure, iatrogenic bowel injury, local abscess, and post-reversal periosteal dermatitis are associated with various postoperative complications identified.[2,3]

Ileostomy closure is sometimes considered to be a minor operation, but substantial morbidity and mortality are associated with it. Prospective research demonstrated that early enteral feeding is healthy and reasonably tolerated after loop ileostomy reversal. In addition, it contributes to the early recovery of bowel functions and therefore decreases the stay in hospital.[4] Conventionally, patients are not held orally for 4-5 days with an in situ nasogastric tube following reversal surgery. 5 days of administration of intravenous fluids and antibiotics.[2] As reported in a review article, the average complication rate after ileostomy is 17.3 percent.[5] Another research recorded the total

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Article received on: 17/02/2022
Accepted for publication: 12/10/2022

incidence ileostomy reversal complications to be 20.3 percent and the rate of anastomotic leakage was 4.3 percent.[6] The rate of leakage after closure was stated by a Pakistani study to be about 8 percent in patients who started early feeding and 2 percent in patients who started routine late feeding on the 4th post-operative day.[7]

A comparative 2014 study found that early oral feeding is well tolerated after elective intestinal anastomosis, assists in early ileus resolution, decreased wound infection, and short hospital stay.[8] A randomized research trial concluded that early post-operative feeding is healthy, well tolerated and decreases the duration of hospitalization in patients undergoing elective open bowel surgery.[4,9] Early enteral feeding is economical. It is possible to perform Stoma reversal with protocols for early discharge to minimize the hospital stay and the patient and financial burden of healthcare infrastructure.[10] Typhoid infrastructure in our population tuberculosis perforation of the small intestine and tuberculosis perforation volvulus and traumatic large intestine injuries are popular concerns. Late presentation with miserable presentation conditions mandates the temporary creation of stoma at a bout primary surgery. The rationale of this study is to compare between the protections of early and late oral feeding after ileostomy closure (reversal) in terms of postoperative anastomotic leakage

MATERIAL & METHODS

After institutional approval, the present study was conducted in the Department of Surgery Unit, Leady Reading Hospital Peshawar from July 2020 to January 2021. Based on the premise that early oral feeding decreases hospital stay to a minimum of two days (2-4 days) from a maximum of fifteen days (12-15 days), based on published literature and our own hospital experience. For any recruitment of patients, randomized controlled trial technique was used. Stoma patients who underwent temporary ileostomy and colostomy were admitted for closure. Informed consent has been taken. Patients with comorbid conditions and chemotherapy-related immune suppression were removed from the study. In all patients. preoperative tests such as CBC. electrolytes, BUN, and total serum protein were performed. Radiological comparison investigation was carried out to exclude distal obstruction. In selected patients, stoma reversal was expected. Until anesthesia induction, prophylactic broad-spectrum antibiotics is administered to all patients. Anastomosis was performed in all cases by hand sewn two-layer technique.

In this study. 226 patients were observed (113 in each group). Using 200ml 20 percent mannitol solution combined with one liter of fruit juices 250ml taken half an hourly along with one liter of ringer lactate, the proximal loop was prepared intravenously. Using standard saline and kleen enema per rectal, the distal loop was washed with orthograde lavage. A senior specialist carried out the closure of the stoma. Using the billing system. patients were randomly divided into two categories. In the early postoperative phase. Group A permitted oral feeding (within 24 hours after surgery). Group B who preserved “nil by mouth” for up to 72 hours in the post-operative phase. Patients were held nil by mouth in the post-operative period while intravenous antibiotics and fluids in both groups were listed for the duration. Within 24 hours in group A and after 72 hours in group B, 30 ml of liquid per hour was initiated orally.

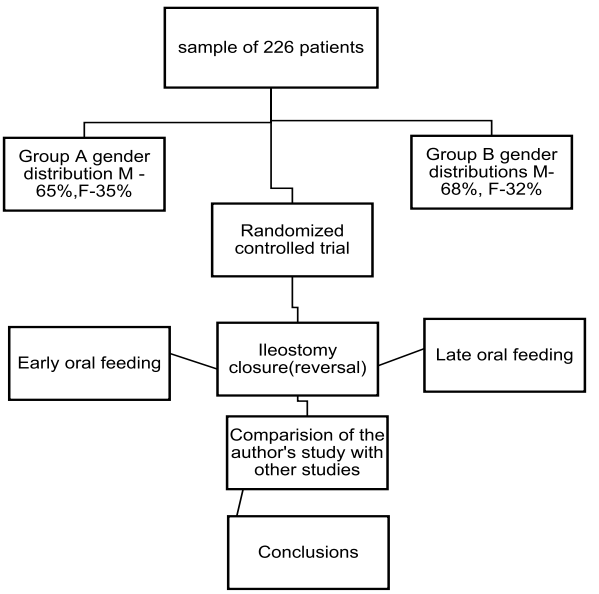

Figure-1. Flowchart offers a rough indication of the steps to be taken from data collection to drawing data conclusions.

RESULTS

A total of 226 patients were enrolled. There were 113 males (50 percent) and 113 women (50 percent) present. The male to female ratio was 1: 1. The average age for group A was 42 ±6.94 years, and 44 ± 6.15 years in category B. There were 73 (65 percent) male and 40 (35 percent) female patients in early feeding group A (n=113). Within 24 hours of stoma closure, irrespective of bowel movements, this feeding began. In late feeding group A (n=113), 73 patients (65 percent) were male, and 40 females (35 percent). The traditional 4-5 days of nil per mouth and nasogastric (N/G) aspiration were maintained. Loop ileostomy and colostomy were present in most of the patients. The groups had age and sex distributions that were comparable (p >0.05). In addition, both groups exhibited a comparable mean surgery duration. In terms of the operational findings, however, the groups differed significantly (p>0.05): Group A had flimsier adhesions and Group B had denser adhesions. Intraoperative complications occurred in 18.7% of Group A and 20% of Group B patients, indicating that there was no significant difference between the groups (p>0.05: Table-I). Early oral feeding was well tolerated in 73.3 percent of cases, while 80 percent was statistically insignificant with p-value=0.5 in late oral feeding. No leakage or fistula in either category was recorded in this study and no statistical test was computed due to its constant value. No deaths in any category were registered. Comparison of author's study is done with other studies regarding feed tolerability's in Table-II.

Gender	Group A	Group B	Total	P-Value
Male	73(65%)	76(68%)	149(6%)	>0.05
Female	40(35%)	36(32%)	77(34%)	
Total	113(100%)	113(100%)	226(100%)	

Table-I. Gender distribution of the patients

Studies	Duration (Hours)	Feed tolerated (%)
Author's Study	24	79
Bufo et all[11]	24-48	84
Livingston and Passaro[12]	48-72	87
Krando[13]	Within 6	91
Rajput et all[14]	Within 4	90

Table-II. Comparison of the author's study with other feed tolerability studies

DISCUSSION

It is standard to keep the patients "nil by mouth" after gastrointestinal anastomosis till patient. passes flatus. Nonetheless, adequate nutrition has been a significant objective in postoperative consideration and now it is as a rule progressively perceived that retaining oral feeds for scarcely any days after post-medical procedure in such cases prompts healthful exhaustion and its outcomes. The conventional way to deal with beginning post-operative feeding care of following inside resection has been traditional to anticipate the goal of postoperative a dynamic ileus, as demonstrated by the presence of gut sounds and entry of flatus. Nonetheless, continuing clinical preliminaries of patients undergoing laparoscopic or laparoscopic-assisted colectomy with protocol-initiated feeding rather than sign return of gut work resulted in early feeding and shortened hospital stay[15,16], Compared to early feeding with restricted diets. Lewis and collaborators conducted a meta-investigation in 2001. Based on 11 trials, they concluded that adhering to a restricted diet had almost no advantage.[17] They drew attention to the overwhelming effect of post laparotomy dysmotility on the stomach and colon and that the small bowl recovers effect of ordinary function anywhere in the range of 4 and 8 hours, with feeding endured and food preserved within 24 hours.[18] Another common idea is that for many days, patients do not eat to prevent anastomotic leakage (which lacks evidence) after colorectal surgery. There is, however, evidence that adequate oral intake has a reinforcing effect on intestinal anastomosis and is not associated with anastomotic complications. In addition, feeding has been shown to reverse hunger induced mucosal atrophy and increase anastomotic collagen deposition and strength.[19]

A systematic analysis and meta-analysis of early randomized trials after gastrointestinal surgery, enteral feeding versus 'nil by mouth,' twelve studies concluded that there was no obvious advantage of holding patients' nil by mouth after elective gastrointestinal resection and early feeding may be beneficial. These patients need some form of nutritional support, as surgical patients are subjected to postoperative stress and hyper

catabolic status. In the form of parenteral nutrition, enteral or whole. While there is clear evidence that 'nil by mouth' is not supported, the evidence also conflicts over the role of early enteral nutrition relative to conventional postoperative feeding techniques, including comprehensive parenteral nutritional support[20]. This research covered 226 cases, with a full follow up duration. We studied the characteristics of patients, co-morbidities considered a potential risk factor, like BMI level, for postoperative outcome. In addition, to validate our results, it is related to a pre-determined model procedure of a broad multicenter prospective trial. Our study is subjected to some limitations. First, minor sample size may have influenced our study. Second, co-morbidities of patients may have effect on outcome of both techniques of our study. Third, nature of surgery for which stomas have been brought out may have influenced our study. Fourth, nature of stoma may have effect on our study outcome.

CONCLUSION

Our study concludes that early oral feeding is better and safe in terms of anastomotic leaks compared to late oral feeding after ileostomy closure

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3	Muhammad Zeb	Stat analysis, Final Drafting, Proof reading.	
4	Sabir Khan Khattak	Proof reading, Data analysis, Study design.	
5	Azhat Hayat Khan	Data collection, Computer work.	
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