

Early oral feeding after gastrointestinal anastomosis

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Abstract

To allow healing of the anastomotic site, nil-by-mouth is widely practiced for several days after resection and anastomosis of gastrointestinal. This study determines the feasibility and safety of early oral feeding following gastrointestinal resections and anastomoses.

This prospective study included consecutive patients who underwent gastrointestinal resection from June 2016 to June 2021. These patients divided into two groups, according to their postoperative feeding protocol. The early oral feeding group received oral diet on the first postoperative day, while the late oral feeding group were started on oral feeding after the passage of flatus.

No significant differences were found in tolerance to oral feeding ($p = 0.230$) and the postoperative complications ($p = 0.253$) between the two groups. Compared with the late oral feeding group, time to first flatus, bowel movement and length of postoperative hospital stay were significantly shorter in the early oral feeding group (for all $p = 0.002$).

Early oral feeding after gastrointestinal anastomosis is feasible and safe.

Key words: Early oral feeding, Gastrointestinal, Anastomosis

Introduction

Resection and anastomosis remain the standard treatment for a variety of gastrointestinal (GI) conditions [22]. However, surgery on the GI tract carries a greatly increased risk of complications that are seldom encountered in other surgical areas [13].

The postoperative ileus (POI) is a major determinant of GI function after surgery [10, 16, 24]. Over the past decades, POI has been an important reason for adopting the traditional approach “nothing by the mouth” until the passage of flatus or for five days [2, 3, 14, 13, 16, 17]. In fact, this philosophy is based on a false notion [3, 16, 17].

During recent years, the approach to feeding patients postoperatively has changed greatly, as advances in the understanding of postoperative GI physiology [2, 3, 8, 10, 16, 23].

Early postoperative oral feeding is one form of enteral nutrition (EN); it is introduced as an important part of the enhanced recovery after surgery (ERAS) protocol [12, 13, 20]. However, early oral feeding (EOF) aims to accelerate the recovery time in terms of improving bowel function and wound healing after GI surgeries [1, 3, 10, 13, 22, 24]. Based on recent studies, there is a growing body of evidence to demonstrate the feasibility, safety and effectiveness of early postoperative oral feeding in the field of GI surgery [3, 10–13, 16, 18, 20, 24].

However, general surgeons in our hospitals still adhere to “nil-by-mouth” during the early postoperative period after GI anastomoses. Although EOF might be a promising one, whether early or later oral feeding benefit patients remains unknown in our practice, authors from three hospitals shared the same attitude. In addition, these surgeons have two important concerns for allowing EOF postoperatively in patients with GI anastomoses; first, does EOF increase the incidence of aspiration? Second, does EOF increase the incidence of anastomotic leakage (AL)? Therefore, these assumed hazards of allowing food in the early postoperative period have not been scientifically tested in our practice.

The aim of this study is to determine the feasibility and safety of EOF following GI resections and anastomoses.

Patients and Methods

This study was designed as a prospective and was approved by the Department of General Surgery at the Faculty of Medicine, University of Aden. The study included 120 patients operated on from June 2016 to June 2021 in three hospitals; Algamhuria General Modern Hospital, 22 May Hospital and Basuheeb Military General Hospital in Aden, Yemen. All patients involved asked to provide their informed consent. We selected all patients who were 18 years of age or older of both genders who underwent elective or emergency open GI resection and anastomoses for varying surgical indications.

We wanted to test the hypothesis that GI anastomosis patients who received EOF postoperatively are more likely to develop complications and intolerance of diet than patients who nothing by mouth until resolve POI. In order to test it, we divided the patients into two groups, EOF as intervention group and late oral feeding (LOF) as control group. We selected randomly 60 patients for each group by using sealed envelopes at the end of surgical procedure. The postoperative outcomes of this EOF group were compared to those for LOF group (conventionally treated) who were nil by mouth until resolution of ileus.

In this study, we defined GI anastomosis is way to restore GI continuity. Postoperative EOF defined as a starting oral intake of a clear liquid diet (CLD) as the first meal on the first postoperative day (POD1) regardless of the presence or absence of the signs that indicate the return of bowel function (BFR). Postoperative LOF was defined as nil by mouth until resolution of POI after the POD1 and thereafter. Patient's tolerance of oral intake defined as absence of postoperative nausea and vomiting (PONV) or abdominal distention. Intolerance of oral nutrition (ON) defined as presence of PONV or abdominal distention. Clinically, POI defined as absence of flatus and bowel movement (BM). Physiologically, Livingston and Passaro defined ileus as the functional inhibition of propulsive bowel activity, irrespective of pathologic mechanism^[18]. The BFR (resolution of POI) defined as time to the first occurrence of either flatus or BM (excluding bowel sounds). Postoperative complications defined as occurrence of any postoperative morbidities. The AL defined as defect in the anastomotic site-causing outflow of GI contents outside the lumen. Clinically, AL confirmed by discharge of intestinal contents from incision or drain site, or radiologically using CT scan with water-soluble contrast. Postoperative pneumonia defined as an infiltration shadow on chest radiography, a demonstrated increase in inflammation.

Wound infection defined as the presence of recognized pathogens in wound discharge confirmed by culture and sensitivity results and supported by clinical or hematologic evidence of infection. Length of postoperative stay (LOS) defined as the total number of days spent in the hospital from the time of admission to surgical theatre for the operation until discharge.

In our study, resection and anastomoses were standardized for both the EOF and LOF groups. Preoperatively, bowel preparation was done for all elective cases. All patients received prophylactic antibiotics before skin incision. All patients were put in supine position. General anesthesia with endotracheal intubation was used in all cases and a nasogastric tube (NGT) was inserted in all patients during surgery and was removed immediately after it. Incision made will vary according to which access is required. Finally, a two-layer anastomosis was constructed with Vicryl 3 – 0 or 2 – 0. Drain was placed in some cases. All patients received a standard postoperative antibiotic cover.

Our postoperative oral feeding protocol using was based on CLD as the first meal in both groups. For patients in the EOF group, CLD (water, orange juice, apple juice or grape juice) allowed at will at POD1 and was adjusted according to tolerance. If the patient tolerates the liquid diet, the diet advanced to a soft diet. Patients who did not tolerate early feeding, the feeding was

stopped for 12 hours and refeeding started afterwards. For patients in the LOF group, the feeding was started only after the BFR and the same feeding plan was given as in EOF group.

Postoperatively, all patients in both groups were assessed clinically and the data were recorded in the actual time that the occurrence took place. Variables related to patients demographic and characteristics included age, gender, timing of surgical intervention, surgical indications and type of surgery. Postoperative complications outcome variables included AL, pneumonia and wound infection. Postoperative recovery outcomes variables included BFR was assessed by (time to first flatus and time to first BM), tolerance to oral feeding was assessed by (tolerated a CLD and resumption of soft food) and postoperative LOS.

The primary outcome endpoints were AL, resumption of soft food, postoperative LOS and overall complication rate. The secondary endpoints were pneumonia, total tolerance of CLD and BFR.

The discharge home criteria used in our study for both groups included removal drain if there, no sign of a postoperative complication, unassisted ambulation, ability to intake soft diet regardless of BFR in EOF group and after BFR in LOF group and tolerable pain on oral analgesics.

All patients were followed up for one month after discharge at outpatient clinic or by calling patients or their relatives.

All analyses were performed using IBM SPSS Statistics version 25. A *P*-value of ≤ 0.05 was considered statistically significant. Wilcoxon rank-sum test was used for non-normal distributions continuous data such as time to first flatus or postoperative LOS. The *t*-test was used for continuous data with normal distributions such as age. The χ^2 was used for categorical data such as gender or complications and Fisher's exact test was used when it was smaller than five in any cell of data table does. The continuous data were expressed in mean \pm standard deviation (SD) and the categorical data were expressed as percentages.

Results

After surgery, patients in the EOF group were compared to the LOF group. Table 1 showed the demographics and baseline characteristics of the two groups and there was no significant difference between the two groups. The rate of total tolerance of CLD as the first meal, 56 patients (93%) of the EOF group tolerated on POD1 compared with 52 patients (87%) of the LOF group tolerated on first day after BFR, but this is not significant ($p = 0.230$).

Table 1: Patients demographic and baseline characteristics

Characteristics	Early oral feeding group (n= 60)	Late oral feeding group (n= 60)	<i>P</i> -value
Age (years \pm SD)	51 \pm 7.3	49 \pm 9.2	0.568
Sex			
Male	44 (73.3%)	47 (78.3%)	0.528
Female	16 (26.7%)	13 (21.7%)	
The timing of surgery			
Elective	51 (85%)	48 (80%)	0.486
Emergency	9 (15%)	12 (20%)	
Surgical indication			
Pathological	41(68.3%)	39(65%)	0.619
Trauma	19 (31.7%)	21(35%)	
Surgical procedure			
Gastrojejunostomy	9 (15%)	7 (11.7%)	0.736
Segmental small intestine resection	14 (23.3%)	12 (20%)	

Left hemicolectomy	7 (11.7%)	8 (13.3%)	
Right hemicolectomy	10 (16.7%)	11 (18.3%)	
Ileostomy closure	6 (10%)	5 (8.3%)	
Colostomy closure	11 (18.3%)	13 (21.7%)	
Low anterior resection of rectum	3 (5%)	4 (6.7%)	

Table 2 showed the comparison of postoperative complications between the two groups. The rate of total complications was 10% and 15% in the EOF group and the LOF group, respectively ($p = 0.253$). The rate of AL was 3.3% in the EOF group and 5% in the LOF group, ($p = 0.657$). The most common complication was pneumonia, the rate of which was 5% in the EOF group and 6.7% in the LOF group ($p = 0.623$).

Table 2: Comparison of postoperative complications

Variables	Early oral feeding group (n= 60)	Late oral feeding group (n= 60)	P-value
Anastomotic leak	2 (3.3%)	3 (5%)	0.657
Pneumonia	3 (5%)	4 (6.7%)	0.623
Wound infection	1 (1.7%)	2 (3.3%)	0.670
Total complication	6 (10%)	9 (15%)	0.253

Table 3 showed postoperative recovery outcomes in both groups. Time to first flatus was significantly faster in the EOF group compared with the LOF group (2.3 ± 0.7 days versus (vs) 4.1 ± 0.1 days, $p = 0.002$). Time to first BM was significantly shorter in the EOF group compared with the LOF group (4.2 ± 1.1 days vs 6.3 ± 0.2 days, $p = 0.002$). Time to first resumption of soft food was significantly faster in the EOF group compared with the LOF group (5.2 ± 1.4 days vs 10.5 ± 2.4 days, $p = <0.001$). The postoperative LOS was significantly shorter in the EOF group compared with the LOF group (10.3 ± 3.5 days vs 12.8 ± 4.2 days, $p = 0.002$).

Table 3: Comparison of postoperative recovery outcomes

Variables	Early oral feeding group (n= 60)	Late oral feeding group (n= 60)	P-value
Time to first flatus (day)	2.3 ± 0.7	4.1 ± 0.1	0.002
Time to first bowel movement (day)	4.2 ± 1.1	6.3 ± 0.2	0.002
Resumption of soft food (day)	5.2 ± 1.4	10.5 ± 2.4	<0.001
Length of postoperative stay (day)	10.3 ± 3.5	12.8 ± 4.2	0.002

Discussion

This study is a first prospective clinical trial to challenge the existing routine of "nil-by-mouth" in patients with resection and reconstruction of GI in our hospitals. There are two important questions (1) When is oral feeding introduced in the postoperative GI patient? (2) What type of diets are patients first given postoperatively? The optimal timing and diet type of oral feeding patients postoperatively is still controversial^[5, 10, 13, 22]. The effect of early oral intake on AL and tolerability of patients due to prolonged POI has been considered for many years the "dark side of the moon" in our local practice.

From the viewpoint of the traditional general surgeons, the common practice of nasogastric suction of the stomach and fasting by resting the bowel until BFR is thought to prevent PONV,

prevent gastric dilation, treat ileus, and allow the anastomosis to heal [3, 11, 14, 16, 17, 22, 24]. This belief has been used to justify this practice and its benefits [6, 13].

However, various studies have questioned this traditional concept [4, 6, 13, 24, 25]. In our study, most patients tolerate CLD as the first meal successfully in the EOF group compare the LOF group and we find no difference in tolerance between the two groups. This is consistent with the results of various studies that showed tolerance to CLD on POD1 after GI surgeries [11, 14, 16, 19, 23, 25]. By contrast, Wang *et al.* [24] found that the rate of intolerance of CLD in the EOF group was higher than that in the conventional feeding group, with no significant difference shown between the two groups.

In our study, the solid food as the first meal at POD1 was not investigated. In fact, fewer studies suggested that EOF of a solid diet as the first meal is safe, well tolerated, and preferred by patients compared to the typical stepwise progression of diet starting with a CLD [8, 10, 15, 20, 25].

One point at issue, after GI surgeries is a fear of postoperative GI complications; namely PONV, associated with gastric emptying delay due to POI. The POI is an expected, but temporary, impairment of intestinal motility, which is viewed as non-preventable [4, 8, 10, 17]. Our results have shown that early oral intake does not result in an increased length of POI. Various studies have showed that no significant associations between time to first meal and GI complications [2, 3, 9, 10, 12, 15].

Many factors that affect the return to normal gut function after resection includes patient's comorbidities and health of the remaining bowel. Several studies verified the factors that effect on increasing the incidence and length of POI after GI surgeries, including preoperative fasting, use anesthetic, type of surgery and incision, bowel manipulation, complications, use opiate analgesic, use of NGTs, postoperative sympathetic hyperactivity, electrolyte imbalance, and excess fluid build-up [4, 8, 12, 15, 17-19]. However, three previous studies have showed that the amount of blood loss during the surgery is the main factor contributing to failure of early postoperative oral feeding [8, 15, 19]. This effect can be explained by that more volume expanders were required to replenish the blood loss leading to bowel edema, prolonged ileus and hence oral feed intolerance [8, 15].

However, physiologically, waiting until BFR to feed patients is not consistent with the return of GI motility [16, 23]. The motility of the small intestine resumes within 6 to 12 hours of surgery, the stomach resumes within 12 to 24 hours, and colonic motility resumes within 48 to 72 hours [2, 6-9, 16-19]. This which may explain why so many abdominal patients can eat an early oral and even solid or semi-solid diet immediately following resection, without passage of flatus or BM [16-19]. On the other hand, our findings support that fact.

From a physiologic, anatomic standpoint and our results, we could make a conclusion that patients could tolerate EOF very well. The early resumption of ON decreases the incidence of POI; the explanation may be, by stimulating the reflex that produces coordinate propulsive activity and elicits the secretion of GI hormones, thus shortening the duration of POI instead of causing it [17].

The other point at issue, after GI surgeries is a fear of anastomosis dehiscence. Advocated general surgeons offer the explanation for that a food bolus would increase intraluminal pressure and cause anastomotic dehiscence [9, 11, 19, 24]. However, restricted ON is not scientific evidence-based [6, 4, 25]. On the contrary, experimental studies demonstrated that early postoperative oral intake accelerates GI anastomotic healing in the animal (rabbit and rat) models in comparison with parenteral feeding with a fasting period and the increase in hydroxyproline (collagen) content of the anastomotic tissue was the underlying mechanism [4, 12, 16-18, 22]. As shown in our study, that early oral intake does not result in an increased incidence in postoperative complications, especially the presence of AL. This is consistent with the results of various studies [1-5, 7, 9-11, 16-18, 22, 24, 25]. By contrast, Li *et al.* [13] found that the rate of AL was higher in EOF compared with LOF after open esophagectomy, whereas did not find difference between the both groups, after minimally invasive esophagectomy by video-assisted thoracoscopic surgery. Therefore, the wide-spreading belief, that EOF cause's AL is not true [1, 4, 11, 17, 18, 22].

We are looking at this issue from a physiological standpoint; first, even when not being fed, the GI tract produces 500 to 1000 ml/day of gastric secretions and 1L to 2L of biliary and pancreatic secretions per day. Second, the bowel mucosa heals rapidly, and a watertight seal will have formed within 24 hours of the postoperative period [3, 4, 6, 7, 16, 17, 23]. This may also help to explain why the rate of AL was low in the EOF group in our study. Previous studies have showed that no relationship between the timing of oral intake and AL [1, 13, 14, 16–18]. Systematic review by Smeets *et al.* [20] demonstrated that the effect of early oral intake on AL is unclear. This is mainly due to these existing studies have been clinical heterogeneous and at risk of bias.

On the other hand, there are systemic and local factors that may contribute to failure of anastomoses; chronic wasting diseases including diabetes, cirrhosis, uremia, and other chronic diseases, which impair the body's repair capacity as well as its ability to fight infections and thus, healing of the anastomosis [1, 16, 18, 22]. The chronic wasting diseases compromise healing of the anastomosis, as decrease of the synthesis collagen does. This may explain why those patients with a poor preoperative nutritional status are more prone to complications in many studies [14, 16, 22]. Experimental data in both animals and humans showing that the anastomotic site was the weakest 3 days after the operation. This period is a critical phase of anastomotic healing, as there is a high risk of AL. By postoperative day 3 or 4, collagen deposition had rapidly increased the tensile strength of the anastomosis [22].

The most important local factors that affect integrity of the anastomosis include excessive tension on anastomotic site, disease of an anastomotic stoma and devascularize of an anastomotic site. All these factors compromise healing of the anastomosis, as an impair blood supply does [18,22].

The presence of flatus and BM are used to represent the end of POI and the ability of the post-surgical GI patient to tolerate oral food [8, 10, 20, 24]. The postoperative LOS used as one of the evaluation indices of EOF [21]. In our study, early oral intake is associated with a shorter postoperative LOS and bowel function recovery quicker in the EOF group. Similar results has been demonstrate by several studies [2–4, 8–11, 23, 24].

There are many studies are supporting EOF in adults, but few in children [4]. Three studies were concluded that EOF following intestinal anastomosis in children are safe and well tolerated [4, 6, 19].

It stands to reason that no necessity to keep the 5 day fasting in order to prevent postoperative complications in patients with GI anastomosis. Contrary to period of postoperative fasting, experimental studies have shown that the physiological effects of EOF including; first, increased collagen deposition in the healing anastomoses, increased bursting strength as previously mentioned thus improves wound healing. Second, it prevents enterocyte and colonocyte dysfunction by reversing GI mucosal atrophy induced by starvation; this effect can be explained by that the portal circulation is not bypassed and in addition, it preserves the luminal delivery of nutrients to the gut mucosa. To give effect to prevention translocation of bacteria results in reduction sepsis and wound infection. Third, it reduces postoperative surgical stress by reducing systemic inflammation, improving immunity and reduces metabolic response to surgery by reducing insulin resistance and increasing muscle function [2, 9, 12, 16, 17].

From our viewpoint, the strength of this study: first, the data collected involving times may reflect the actual time that the occurrence took place, e.g., first flatus, BM and time to first liquid or soft meal. Second, it included patients from three different hospitals and each surgeon had the same way of handling their surgical patients. We recognized the limitations in our study: first, it was single blind (patients only). Second, the preoperative nutritional status of the patients has not been evaluated. Third, the total time until patient tolerated solid diet not used.

Conclusion

The finding of our study shows that EOF following GI anastomoses is feasible and safe. Furthermore, EOF found to improve bowel function recovery, shorten postoperative LOS, and tolerated by most patients without any adverse effect. However, the results of this study are

difficult to generalize for all GI surgical patients, especially esophageal anastomosis and in some cases of rectal anastomosis in our local practice. Finally, the findings from this study are promising for the use of EOF to improve surgical patient's outcome.

References

1. Abela G (2017). The potential benefits and harms of early feeding post-surgery: a literature review. *Int Wound J*; 14:870 – 873.
2. Ahmed M, Mehboob M, Ahmed F, Babar KM, Iqbal M, Qureshi SA (2019). Comparison of early versus late oral feeding after elective stoma closure. *J Surg Pakistan*; 24 (4):167 – 70.
3. Ali I and Bhuvan (2020). Comparative study of early vs late enteral feeding following intestinal anastomosis. *Int J Sci Res Pub*; 10 (1): 67 – 69.
4. Alladi MBA (2013). Early oral feeding in pediatric intestinal anastomosis. *Indian J Surg*; DOI 10.1007/s12262-013-0971-8.
5. Consoli MLD, Fonseca LM, da Silva RG, Correia TD (2010). Early postoperative oral feeding impacts positively in patients undergoing colonic resection: results of a pilot study. *Nutr Hosp*; 25:806 – 809.
6. Davila-Perez R, Bracho-Blanchet E, Galindo-Rocha F, Tovilla-Mercado J, Varela-Fascinetto G, Fernandez-Portilla E (2013). Early feeding vs 5 - day fasting after distal elective bowel anastomoses in children. A randomized controlled trial. *Surg Sci*; 4:45 – 48.
7. Dorai D, Kumar JL, Chitra T, Prasanna G (2016). Effects of early enteral nutrition on patients after emergency and elective gastrointestinal surgery. *IAIM*; 3 (8):1 – 10. (8) El Nakeeb A, Fikry A, El Metwally T, Fouda E, Youssef M, Ghazy H (2009). Early oral feeding in patients undergoing elective colonic anastomosis. *Int J Surg*; 7:206 – 209.
8. Jan Y, Ahmad S, Waqas, Khan A, Nasir IUI, Rumman Khan R (2014). Comparison of early versus delayed oral feeding in elective intestinal anastomosis. *Pak J Surg*; 30 (2):120 – 127.
9. Jiang Z, Chen QC, Zhang JH, Cao LX, Chen ZQ (2019). Effect of early oral feeding on gastrointestinal motility in patients undergoing colorectal resection: a meta-analysis of randomized clinical trials. *Dig Med Res*; 2:17.
10. Kato K, Omatsu K, Okamoto S, Matoda M, Nomura H, Tanigawa T (2021). Early oral feeding is safe and useful after rectosigmoid resection with anastomosis during cytoreductive surgery for primary ovarian cancer. *World J Surg Oncol*; 19:77.
11. Kumar RL, Sundresh NJ, Gopikrishna D, Vigneshwaran P, Gurupraveen APS (2020). A clinical study on benefits of early enteral feeding after intestinal resection and anastomosis. *JMSCR*; 08 (11):55 – 58.
12. Li X, Yan S, Ma Y, Li S, Wang Y, Wang X (2020). Impact of early oral feeding on anastomotic leakage rate after esophagectomy: a systematic review and meta-analysis. *World J Surg*; <https://doi.org/10.1007/s00268-020-05489-z>.
13. Lopes LP, Menezes TM, Toledo DO, De-Oliveira ATT, Longatto-Filho A, Nascimento JEA (2018). Early oral feeding post-upper gastrointestinal tract resection and primary anastomosis in oncology. *ABCD Arq Bras Cir Dig*; 31(1):e1359.
14. Marwah S, Godara R, Goyal R, Marwah N, Karwasra R (2007). Early enteral nutrition following gastrointestinal anastomosis. *Int J Gastroenterol*; 7 (1).
15. Rao VM, Tagore V, Ashok P, Kandan N (2019). Early enteral nutrition following small bowel surgery: our experience in a tertiary care hospital in north coastal Andhra Pradesh. *J Evid Based Med Healthc*; 6 (44):2852 – 2855.
16. Shakya P, Bhuvan C (2016). A myth that early feeding causes bowel anastomotic leakage: is it true? *Int Surg J*; 3:81 – 3.
17. Sheth JY, Trivedi MR, Darshan JR (2015). Early enteral feeding versus nil by mouth after intestinal resection and anastomosis: a study of 60 cases. *Int J Sci Stud*; 3 (3):1 – 5.

18. Sholadoye TT, Suleiman AF, Mshelbwala PM, Ameh EA (2012). Early oral feeding following intestinal anastomoses in children is safe. *Afr J Paediatr Surg*; 9: 113 – 6.
19. Smeets BJJ, Peters EG, Horsten ECJ, Weijs TJ, Rutten HJT, Buurman WA (2017). Effect of early vs late start of oral intake on anastomotic leakage following elective lower intestinal surgery: a systematic review. *Nutr Clin Pract*; 99 (9):1 – 9.
20. Sun DL, Li WM, Li SM, Cen YY, Xu QW, Li YJ (2017). Comparison of multi-modal early oral nutrition for the tolerance of oral nutrition with conventional care after major abdominal surgery: a prospective, randomized, single-blind trial. *Nutri J*; 16 (11):1 – 10.
21. Tang Z, Cai H, Cui Y (2018). Influence of early postoperative feeding in gastrointestinal anastomotic fistula formation and healing time in Rabbits. *BioMed Res Int*; 2018:1 – 6.
22. Thapa PB, Nagarkoti K, Lama T, Maharjan DK, Tuladhar M (2011). Early enteral feeding in intestinal anastomosis. *J Nepal Health Res Counc*; 9 (18):1 – 5.
23. Wang J, Yang M, Wang Q, Ji G (2019). Comparison of early oral feeding with traditional oral feeding after total gastrectomy for gastric cancer: a propensity score matching analysis. *Front Oncol*; 9:1194.
24. Zhuang CL, Ye XZ, Zhang CJ, Dong QT, Chen BC, Yu Z (2013). Early versus traditional postoperative oral feeding in patients undergoing elective colorectal surgery: a meta-analysis of randomized clinical trials. *Dig Surg*; 30: 225 – 232.

التغذية الفموية المبكرة بعد الالتحام المعدي المعوي

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الملخص

لترك مكان الالتحام يلتئم، لا شيء يعطى من طريق الفم لعدة أيام، تلك هي الممارسة المكتسبة على نحو واسع بعد الاستئصال والالتحام المعدي معوي. هذه الدراسة تهدف لتحديد القدرة على احتمال وأمان التغذية المبكرة المأخوذة من طريق الفم بعد الالتحام المعدي معوي.

هذه دراسة استشرافية اشتملت على المرضى الذين خضعوا للاستئصال المعدي معوي من يونيو 2016 إلى يونيو 2021م. هؤلاء المرضى قسموا إلى مجموعتين بحسب بروتوكول التغذية خاصتهم بعد العملية الجراحية. مجموعة التغذية المبكرة تلقت الغذاء من طريق الفم في اليوم الأول بعد العملية الجراحية، في حين مجموعة التغذية المتأخرة بدأت في تلقي الغذاء من طريق الفم بعد حدوث غاز البطن (أول خروج للريح).

لا فوارق ذات أهمية وجدت بين المجموعتين لناحية القدرة على احتمال التغذية المعطاة من طريق الفم ($p = 0.230$) ومضاعفات ما بعد العملية الجراحية ($p = 0.253$). بالمقارنة مع مجموعة التغذية المتأخرة، زمن حدوث أول خروج لغاز البطن، زمن حدوث أول تغوط، ومدة المكث في المستشفى بعد العملية الجراحية كانت جميعها أقصر في مجموعة التغذية المبكرة مع فوارق ذات أهمية للكل ($p = 0.002$). نستنتج بان التغذية المبكرة من طريق الفم بعد العملية الجراحة في مرضى الالتحام المعدي معوي' محتمل ومأمون.

الكلمات المفتاحية: التغذية المبكرة من طريق الفم، المعدي معوي، التحام.