ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 11, Issue, 03, pp.2105-2107, March, 2019

DOI: https://doi.org/10.24941/ijcr.34663.03.2019

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

IMPLEMENTING FAST TRACK PROTOCOL IN GASTROINTESTINAL SURGERIES FOR EARLY AMBULATION AND DISCHARGE FROM HOSPITAL

***Dr. Yogesh Kukreja**

Gd Spl Surgery, Military Hospital Jamnagar Pin 361005 Gujrat, India

ARTICLE INFO

Article History:
Received 17th December, 2018
Received in revised form
26th January, 2019
Accepted 03rd February, 2019
Published online 31st March, 2019

Key Words:
ERAS, Fast track protocol, Anastamosis, Colorectal surgeries.

**Corresponding author: Dr. Yogesh Kukreja*

ABSTRACT

Background and objectives: Enhanced Recovery after Surgery (ERAS) or Fast-track Surgery (FTS) or Multimodal Surgery is a single program incorporating multimodal interventions in the perioperative period to expedite recovery. It involves using various strategies to facilitate better conditions for surgery and faster recovery with rapid resumption of normal activities without an increase in post-op complications or readmissions. **Methods:** A Prospective Interventional Randomised Controlled study was carried out at a Armed Forces Tertiary Care Hospital by selecting 60 patients undergoing elective gastrointestinal surgery with an Anastomosis anywhere in the Gl tract distal to (and including) the ileum. The patients were divided, after baseline parameters were recorded, by stratified randomization on the basis of the type of surgery required into case and control groups and subjected to 'fast track' and traditional protocols of peri-operative care and their post-operative recovery. **Results:** The case group had an earlier discharge from hospital with a mean of 4.73 days while the control group had a mean discharge day of 7.27 days. The rate of complications and readmission were not significantly different. **Conclusion:** Fast Track protocol represent a paradigm shift in perioperative care based on simple and evidence based principles. It has resulted in a significantly increased understanding of perioperative physiology and its modifications to improve outcomes. With simple, cost effective measures, ERAS is a vital and powerful tool in decreasing length of stay, complication and re-admission rates.

***Citation*: *Dr. Yogesh Kukreja,* 2019.** "Implementing fast track protocol in gastrointestinal surgeries for early ambulation and discharge from hospital", *International Journal of Current Research*, 11, (03), 2105-2107.

INTRODUCTION

Efforts in improving post-op outcomes have stimulated many surgeons to formulate an ideal perioperative approach for patient management. A single program incorporating multimodal interventions in the perioperative period to expedite recovery has come to be known as Enhanced Recovery after Surgery (ERAS) or Fast-track Surgery (FTS) or Multimodal Surgery (Kehlet and Wilmore, 2002). The program was initially developed and promulgated for use in colorectal surgery. However, recently it has been effectively expanded to various surgical sub-specialties.

It involves using various strategies to facilitate better conditions for surgery and faster recovery with rapid resumption of normal activities after both major and minor surgical procedures, without an increase in post-op complications or readmissions. Better understanding of perioperative principles and measures like patient education, optimizing organ function before surgery, improved postoperative analgesia, early enteral feeding and early ambulation, have resulted in successful outcomes (Kumar et al., 2006).

This study intends to delineate as well as compare fast track methodology with traditional methods of surgical care to observe, if any, changes in achieving better patient outcome.

The following are its main aims

- Shorten recovery time after elective gastrointestinal surgeries
- Decrease morbidity from elective procedures
- Improve institutional efficiency by decreasing patient turn over time.

MATERIALS AND METHODS

A Prospective Interventional Randomised Controlled study was carried out at a Armed Forces tertiary care Hospital by selecting 60 patients undergoing elective gastrointestinal surgery with an Anastomosis anywhere in the Gl tract distal to (and including) the ileum. The patients were divided, after baseline parameters were recorded, by stratified randomization on the basis of the type of surgery required into case and control groups and subjected to 'fast track' and traditional protocols of peri-operative care and their post-operative recovery.

The following were the criteria considered during patient selection

Inclusion criteria

- Age between 16-66yrs either sex
- Coming for elective gastro-iniestinal surgeries
- Anastomosis anywhere distal to (and including) the Ileum

Exclusion criteria

- Uncontrolled co-morbid conditions eg:-diabetes mellitus, hypertension
- Emergency bowel surgeries
- Age <16yrs or >66yrs

RESULTS

In this randomised prospective controlled study the outcome can be summarised as follows

- There was no significant difference in the two groups with respect to age (34.77 years in control group and 33.50 years in study group) and sex distribution. The haemoglobin and albumin levels did not have significant difference in either group.
- There was stratified randomization among patients on the basis of surgery to be performed on them and were comparable in both the groups.
- The anaesthesia under which these surgeries were carried out was not significantly different in the 2 groups. The surgical procedures were carried out uneventfully in other than 1 out of the 60 patients. (one case in the case group had an intra-operative rent in the colon while dissection during the procedure of colostoma closure)
- In the peri-operative care the case group had their urinary catheters, nasogastric tubes and abdominal drains inserted only electively and in those who had them inserted it was for far lesser duration than the control group. This was not associated with any rise in complications. The replacement of either of the tubes in the post-operative period was very low in the case group and an elective rather than routine placement seems plausible in most cases. The mean period for removal of Foley's catheter was 2.17 days in control which was significantly more as compared to 1.00 days in study group. Removal of Ryle's tube having mean period of 4.07 days among control showed statistical significance when compared to 2.45 days in study group. Mean period for removal of abdominal drain was 6.13 days among control which shows statistical significance when compared to 3.80 days in study group.
- Early enteral nutrition was well tolerated in the majority of the patients in the case group. The controls had increased 'nil by mouth' days compared to the cases which has been proven to be of no advantage or rather detrimental to the patient. There was no rise in complications like anastomotic leaks or ileus by this intervention.
- Enforced ambulation and the decreased and elective peri-operative use of tubes and drains promotes ambulation in the post-operative period. Early ambulation is a predictor of length of hospital stay. The mean period for starting of ambulation for control group was 1.77 days which was significantly more as compared to 1.23 days of study cases.
- The incidence of wound infection was not significantly different in either group either in the immediate or delayed follow-up period.
- The incidence of ileus was slightly less in the case group and this can be attributed to measures like avoiding mechanical bowel preparation, elective nasogastric decompression and pro-kinetic agents but this difference was not statistically significant.
- The incidence of anastomotic leaks was not found to be significantly different in either group
- The case group had an earlier discharge from hospital with a mean of 4.73 days while the control group had a mean discharge day of 7.27 days. The day of discharge in the case group was significantly lesser from that in the control group ($p<0.0001$).
- The rate of re-admission in both groups is not significantly different from each other and on adequate follow-up it was ensured that early discharge in the case is not related with increased amount of re-adrnissions.

DISCUSSION

ERAS requires a multi-disciplinary team consisting of the following: surgeon, anesthetist, nurse, nutritionist, physician and physiotherapist. (Feldman and Carli, 2008) A well formulated institutional protocol is necessary for its successful implementation. The team should frequently audit the outcomes and review the components of the program through a feedback system. The interventions followed in ERAS for an elective colorectal surgery are shown in Figure 1. (Aditya et al., 2016). They basically concentrate on patient education, pre-op optimization of co-morbidities, nutritional buildup, minimal starvation, sound surgical and anaesthetic measures, effective analgesia and early ambulation. Majority of components in ERAS, directly or indirectly, aim at maintaining optimal nutritional supplementation of the patient. The same measures mentioned, however, may be modified as per institutional protocol, availability of resources and patient's preferences to be followed in perioperative management of almost any type of surgery.

The main hindrance in implementing ERAS globally, is its low compliance rates. Length of hospital stay (LOS), readmission rates and complication rates have all been seen to be low when compliance to ERAS measures reaches higher percentages (Aditya *et al.,* 2016). ERAS, when implemented successfully, have been associated with a 35-40% reduction in length of hospital stay (LOS) with no concurrent rise in complications or re-admissions. Some studies have noted a fall of upto 50% in surgical as well as non-surgical complications in the post-operative period (Carter *et al.,* 2010). ERAS has also been associated with an earlier return to work and better quality of life outcomes. Institutions may benefit from ERAS in formulating and following a structured perioperative protocol, streamlining patient care and minimizing errors in delivery of care. With reduced LOS in hospitals, institutes may be able to serve more patients within the available infrastructure with better cost control. Studies from both developed, as well as developing countries, have noted a 28-32% fall in healthcare costs after implementing ERAS (Wind *et al.,* 2006).

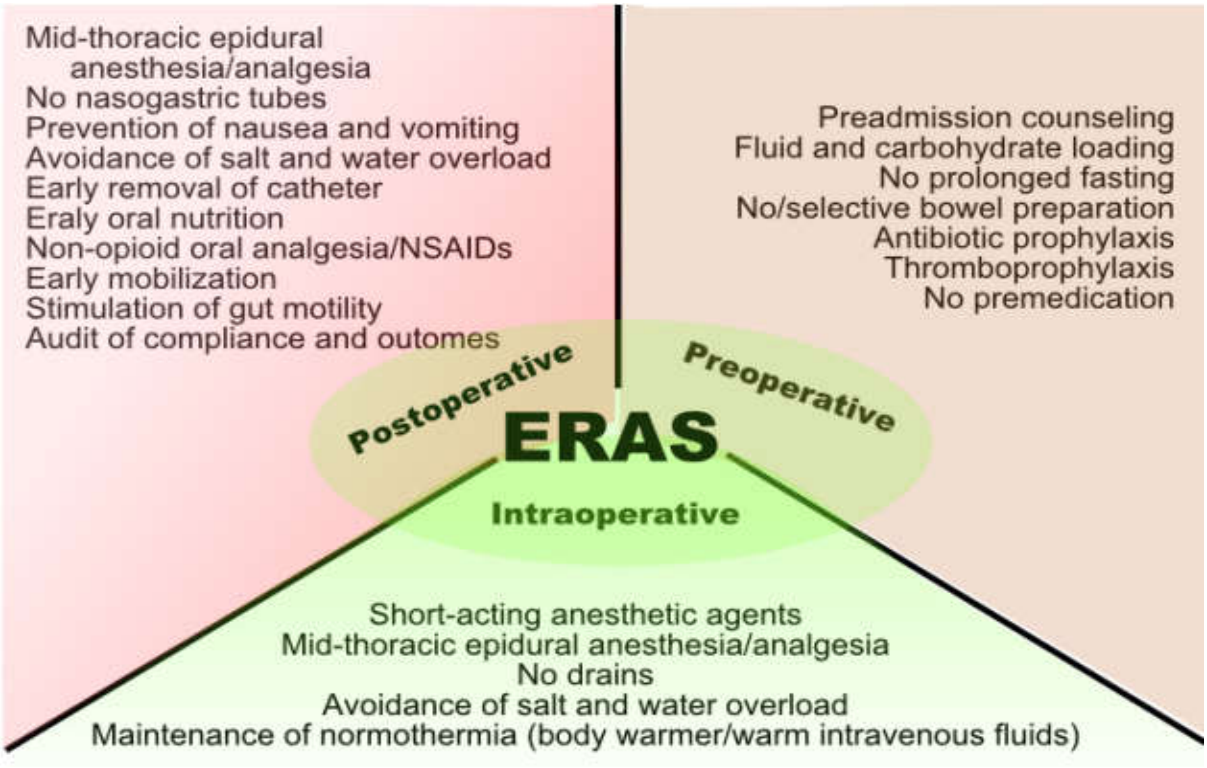

Figure 1. Components of Fast Track or ERAS protocol

Conclusion

ERAS represent a paradigm shift in perioperative care based on simple and evidence based principles. It has resulted in a significantly increased understanding of perioperative physiology and its modifications to improve outcomes. With simple, cost effective measures, ERAS is a vital and powerful tool in decreasing LOS, complication and re-admission rates thus having important financial implications (Andersen et al., 2007). It is thus advisable for clinicians to be well versed with the components of ERAS and follow it in our daily clinical practice.

REFERENCES

Aditya, J., Nanavati, S. and Prabhakar, 2016. Enhanced Recovery After Surgery: If You Are Not Implementing it, Why Not? *Nutrition Issues in Gastroentrology,* # Series 151.

Andersen, J., Hjort-Jakobsen, D., Christiansen, PS. and Kehlet, H. 2007. Readmission rates after a planned hospital stay of 2 versus 3 days in fast-track colonic surgery. *Br J Surg.,* 94:890, 3.

Carter, J., Szabo, R., Sim, WW., et al., 2010. Fast track surgery: a clinical audit. *Aust N Z J Obstet Gynaecol.,* 50(2):159-163.

Feldman, L. and Carli, F. 2008. Fast Track Inpatient and Ambulatory Surgery. In editor. *ACS Surgery,* Section 1 Chapter 9. ; Decker Publishing;.

Kehlet, H. and Wilmore, DW. 2002. Multimodal strategies to improve surgical outcome. Ameri- can Journal of Surgery, 183: 630-641.

Kumar, A., Scholefield, JH., Andersen, J. and Armitage, NC. 2006. Fast track surgery. In: Johnson C, Taylor I (eds). Recent Advances in Surgery, Vol. 29, Ch. 5. London: *RSM Press,* 59 74.

Wind, J., Polle, SW. and Fung Kon Jin, PHP. 2006. Systematic review of enhanced recovery programmes in colonic surgery. *Br J Surg.,* 93:800, 9.

****