A COMPARATIVE STUDY ON EFFECTIVENESS OF “ENHANCED RECOVERY AFTER SURGERY” (ERAS) PROTOCOL WITH CONVENTIONAL METHOD OF MANAGEMENT OF PATIENTS UNDERGOING GASTRO-INTESTINAL SURGERIES

ABSTRACT

Multimodal interventions, under the umbrella of a single program applied to the care of the surgical patient in the peri-operative period, have come to be known as Enhanced Recovery after Surgery (ERAS). The basic premise is that the impact of surgery on the metabolic and endocrine response is reduced leading to earlier recovery.

The various components of ERAS were followed and the results were compared with conventional method of managing patients undergoing gastro-intestinal surgeries. ERAS implementation has shown to reduce length of hospital stay and earlier return of productivity.

KEYWORDS: ERAS, Fast Track Surgery, Enhanced Recovery after Surgery, Faster Recovery
INTRODUCTION

ERAS protocols, also known as ‘fast track surgery’ are a combination of evidence based peri-operative strategies which work synergistically to experience recovery after surgery.

This expedited discharge is not achieved by lowering the prerequisites for release from hospital, but rather by fulfilling standard criteria earlier due to an accelerated post operative phase.
AIM

To study the effectiveness of “Enhanced Recovery After Surgery” (ERAS) protocol compared with the conventional way of management of patients undergoing gastrointestinal surgeries.

METHODOLOGY OF THE STUDY

The following study was conducted in Stanley medical college & hospital. It is a prospective cohort international study; the source of the study being patients
admitted in general surgery wards for gastrointestinal surgeries. The period of study was from October 2016 to June 2017. Inclusion and exclusion criteria were made, only those patients satisfying both those criteria were included in the study.

Sample Size

<table>
<thead>
<tr>
<th>Study Group</th>
<th>20</th>
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<tbody>
<tr>
<td>Control Group</td>
<td>20</td>
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INCLUSION CRITERIA

- Patients >12 years undergoing gastro intestinal surgeries

EXCLUSION CRITERIA

- Laparoscopic GIT surgeries
- Relaparotomies
- Immunocompromised
- Emergency surgeries

A Proforma was prepared to record the findings.
ERAS COMPONENTS

1) PRE-OP COUNSELLING:

For patients undergoing GIT surgeries, each patient and their attenders were counseled adequately & clear instructions were given.

2) OPTIMISATION OF CO-MORBIDITIES:

- Patients were given adequate breathing exercises.
- Alcoholics and smokers were made to sustain from it.
- Nutritional status were improved.
- Other medical co-morbidities were corrected and made fit for surgery.

3) MINIMAL STARVATION AND CARBOHYDRATE LOADING:

- Patients posted for surgery were kept in nil per oral for maximum of 6 hours before surgery.
- Two hours before surgery they were administered 100 ml of 25% dextrose and 500 ml of 0.9% NaCl.

4) AVOIDANCE OF MECHANICAL BOWEL PREPARATION:

- Oral mechanical bowel preparation were not done.
- Surgeries involving left sided anastomosis of colon, patients were given single phosphate enema on the morning of surgery.

5) DEEP VEIN THROMBOSIS PROPHYLAXIS:
they were given injection. enoxaparin 20mg sc, OD, night before surgery and continued for entire length of hospital stay as OD.

- those patients at high risk of DVT, the prophylaxis were continued for upto one month after surgery.

6) ANTIBIOTIC PROPHYLAXIS:

-injection ceftriaxone 1g IV stat dose was given just prior to skin incision.

-for prolonged procedures (>4 hours), second dose was administered.

**INTRA OPERATIVELY:**

1) EPIDURAL ANALGESIA AND LOCAL BLOCKS:

-all patients received epidural analgesia and continued it for 48 hours post-operatively.

2) SURGICAL APPROACH AND INCISION:

- length of the incision were kept to the minimum as possible.

-a lower transverse incision was made whenever possible.

3) AVOIDANCE OF POST-OPERATIVE DRAINS, NASOGASTRIC TUBES AND URINARY CATHETERS:

-when nasogatric or drain tubes were placed , they were removed just after the purpose of keeping it was fulfilled.

**POST OPERATIVE COMPONENTS:**

1) AVOIDANCE OF OPIATES:
they were administered IV paracetamol infusion and diclofenac/brufen for breakthrough pain.

2) EARLY POSTOPERATIVE DIET:

- Patients were started on oral fluids on 1\textsuperscript{st} post operative days.

- Semisolid diet was started on 2\textsuperscript{nd} POD.

3) EARLY POSTOPERATIVE MOBILISATION:

- Patients were helped to sit in a chair on the evening of surgery, they were made ambulant from the 1\textsuperscript{st} pod itself

**STATISTICAL ANALYSIS & DISCUSSION**
In this study, the average age group of patients in test group is 49. The average age group of patients in control is 44. Patients with age group of 51-60 years form most of the study group. Patients with age group of 41-50 years form most of the control group. Average length of hospital stay for study group is 7 days. Average length of hospital stay for control group is 14 days. There is significant difference in the length of hospital stay between study group and control group. Patients with nil complications accounts for about 80% in study group and 70% in control group. The test group with SSI form about 15% of population and 15% in control group. 1% in test group developed anastomotic leak & control group 2.5% of anastomotic leak. Patients who developed EC fistula were 0% in test group and 2% in control group.
CONCLUSION

1) ERAS is beneficial in reducing the length of hospital

2) It has shown to be very cost effective

Though complications like anastomotic leak, enterocutaneous fistula occurs when following this fast track surgery protocol, the rate, magnitude of complications is reduced in comparison to the conventional method.