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## Clinical profile of cases of intestinal anastomosis

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### Abstract

After intestinal anastomosis, conventional feeding protocol is to keep the patient nil per oral till the patient shows signs and symptoms of gut motility, thereby preventing signs and symptoms of post-operative ileus and to reduce the incidence of anastomotic leak. After major gastrointestinal surgeries, the small intestine (jejunum) will show normal motility 4 – 8 hrs after surgery. All patients who underwent intestinal anastomosis following surgeries like right hemi colectomy, low anterior resection, limited resection etc., in Navodaya medical college and research hospital from Jan 2018 to Jan 2019 are included in the study. 50 patients who underwent intestinal anastomosis were randomized into two groups. In this study, a total of 50 patients, the mean age in the study group is 43.84, and the mean age in the control group is 46.88, and there is no significant difference between the two groups. Of the 50 patients, 12 were females, 9 were started on early feeds and 3 in control group. 1 patient had anastomotic leak with an incidence of 11.11. 38 were male patients, 16 were started on early feeding and 22 in control group. 1 anastomotic leak noticed in control group with the overall incidence in males of 2.63.

**Keywords:** Major gastrointestinal surgeries, intestinal anastomosis, anastomotic leak

### Introduction

Post-operative starvation was the most common practice after gastro intestinal surgeries. Conventional method of feeding is to keep the patient nil by mouth during the post operative period to improve patient compliances and to protect the anastomotic site.

After intestinal anastomosis, conventional feeding protocol is to keep the patient nil per oral till the patient shows signs and symptoms of gut motility, thereby preventing signs and symptoms of post-operative ileus and to reduce the incidence of anastomotic leak. After major gastrointestinal surgeries, the small intestine (jejunum) will show normal motility 4 – 8 hrs after surgery. Postoperative ileus is usually transient and feeding within 24 hours after intestinal anastomosis is well tolerated by the patients. There are studies which have shown that early enteral feeds have a positive effect on gut motility thereby reducing post-operative ileus and increasing patient compliance.

Average gastric and pancreatic secretions are about one to two liters of fluid daily, which is absorbed in the small intestine. Any patient who had undergone intestinal anastomosis tolerate this high amount of endogenous secretions. And also starvation increases insulin resistance and reduces muscle function, thereby changing body metabolism. And studies have shown that early enteral feeding and proper maintenance of post-operative nutritional status of the patients have significantly reduced the risk of post-operative sepsis because of decreased bacterial translocation through gut mucosa. These findings are in favor of early enteral feeding following intestinal anastomosis.

### Methodology

All patients who underwent intestinal anastomosis following surgeries like right hemi colectomy, low anterior resection, limited resection etc., in Navodaya medical college and research hospital from Jan 2018 to Jan 2019 are included in the study. 50 patients who underwent intestinal anastomosis were randomized into two groups,

Study group: early feeding 24hours after surgery Control group: conventional or delayed feeding after onset of bowel sounds / passing flatus.

### Inclusion Criteria

- All patients undergoing intestinal anastomosis

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**Exclusion criteria**

- Patients who are immunocompromised
- Patients with renal failure
- Patients requiring critical care
- Paediatric patients

**Methods**

Patients who underwent intestinal anastomosis following surgeries like right hemi colectomy, low anterior resection, limited resection were selected post operatively, the patients in the study group were kept nil per orally for first 24 hours. the naso gastric tube was removed on the first post operative day invariably after 24 hours of surgery, subjects were started on

sips of clear liquids orally, the amount was gradually increased as tolerated by the patient. The diet was stepped up to soft diet and to regular diet. A record was made of abdominal pain, nausea, vomiting, and abdominal distention by the subjects during feeding.

**Results**

Of the 50 patients studied, 7 patients had SSI with overall incidence of 14 %, of which 2 were in the study group (4 %) and 5 were in the control group (20 %).it is seen that the incidence of SSI was lower in patients started on early enteral feeding, though the two groups were statistically not different with the p 0.28.

**Table 1:** Surgical site Infection

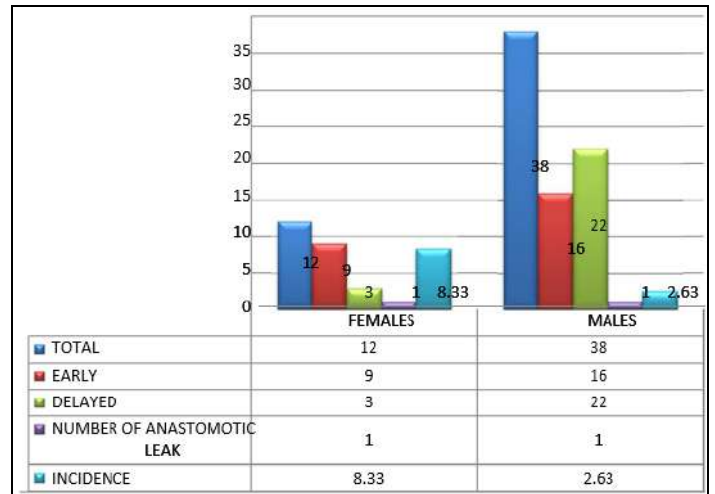
Type of feeding	Number of Cases	Number of Surgical site Infection	Surgical site Infection rate %
Early	25	2	4
Conventional	25	5	20

Of the 50 patients, hand sewen anastomosis in two layers was done for 35 patients and stapler anastomosis was done for 15 patients. 2 patient had anastomotic leak, of which one was observed in the hand sewen group (2.85 %) and one in the stapler group (6.67 %). The two group had a p value Of 0.5479 and are not significantly different from each other.

**Table 2:** Type of Anastomosis

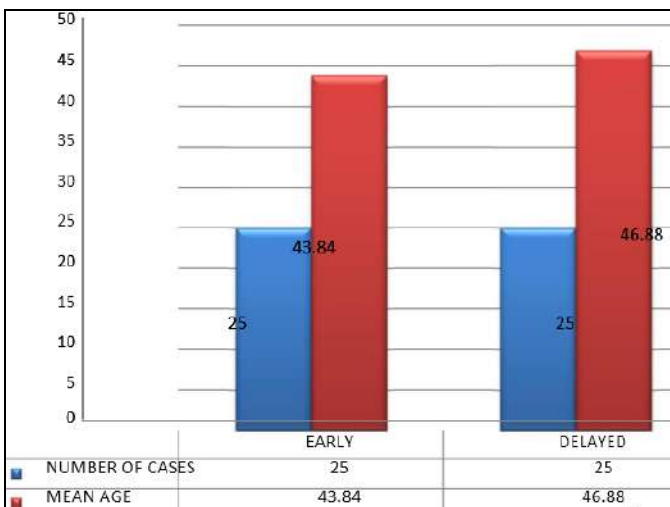
Type of Anastomosis	Number of Cases	Number of Anastomotic Leaks	Rate of Anastomotic Leak %
Hand Sewen	35	1	2.85
Stapled	15	1	6.67

Below is the chart showing the age distribution in both the groups, The mean age of the study group is 43.84, and the mean age of control group 46.88, and the two groups were not significantly different



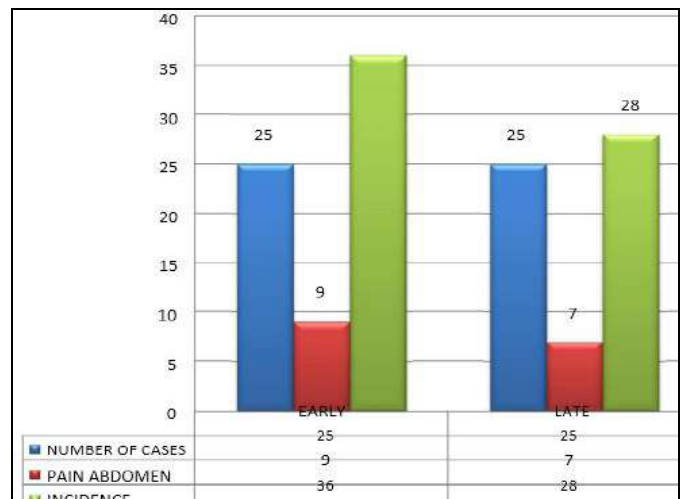
**Fig 2:** Sex Distribution

Of the 25 patient in the study group, 9 had abdominal pain in the post-operative period (36 %), while 7 had similar complaint in the control group (28 %), the two groups were not significantly different p 0.6633



**Fig 1:** Age Distribution

Of the total number of 50 patients, 12 were females, of which 9 were started on early enteral feeding and 3 were on conventional feeding, with 1 patient showing anastomotic leak (8.33 %). 38 were males, of which study group had 16 patients and control group had 22 patient, with one patient showing anastomotic leak (2.63 %).



**Fig 3:** Pain Abdomen

**Discussion**

In this study, a total of 50 patients, the mean age in the study

group is 43.84, and the mean age in the control group is 46.88, and there is no significant difference between the two groups. Of the 50 patients, 12 were females, 9 were started on early feeds and 3 in control group. 1 patient had anastomotic leak with an incidence of 11.11. 38 were male patients, 16 were started on early feeding and 22 in control group. 1 anastomotic leak noticed in control group with the overall incidence in males of 2.63

Of the 50 patients, hand sewn anastomosis was done in 35 patients of which 1 reported anastomotic leak with an incidence 2.85. 15 patient underwent stapler anastomosis of 1 case of anastomotic leak was reported with an incidence of 6.67. And the two groups were not significantly different.

Of the 50 patients, the duration of hospitalization varied from 7 to 13 days with a mean of 9.1 days. The mean duration of stay in the study group of 8 days and the mean duration of stay in the control group is 10.2 days. Although the two groups were not significantly different from one another, the mean hospitalization is reduced in study group

Number of reported cases of surgical site infection in study group is 2 with an incidence of 8. Of the 25 cases in the control group, 5 cases of SSI was reported with an incidence of 20. Though the incidence of SSI was reduced in the study group, the two groups were not significantly different

In the study group of 25 patients, 9 cases of abdominal pain was noticed (36%), 5 patients reported nausea (20 %), vomiting was reported in 4 patients (16%) and 2 cases of abdominal distention was reported (8 %). In the control group, abdominal pain was noticed in 7 patients (28%), nausea in 4 patients (16%),

Vomiting was noticed in 2 patients (8%) and abdominal distention was reported in 2 (8 %). The complications seen in both the groups were not significantly different from one another.

This study shows that the conventional method of feeding in post-operative patients following gastro intestinal anastomosis offers no clear advantage when compared to early enteral feeds. Parameters like anastomotic leak/dehiscence, surgical site infection, and mean duration of hospital stay were not significantly different from one another.

## Conclusion

Patient compliance between both groups showed that there is marginal increase in incidence of post operative nausea, vomiting in the study group although the two groups were not significantly different.

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