

Early Versus Delayed Oral Intake in Appendicectomy: is there any difference?

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ABSTRACT

Background: Appendicectomy is one of the most common general surgical procedure performed under general anesthesia and there is apprehension about time to resume oral feeding. Traditionally oral feeding is not resumed until bowel sounds are returned and patient has passed flatus. This leads to prolonged periods of fast, overall increased hospital stay and cost. Therefore, this study was designed to compare the outcomes of resuming early oral feeding immediately after 06 hours versus traditional method of resuming oral feeding in terms of bowel sounds, first flatus, vomiting and hospital stay.

Methods: This randomized controlled clinical trial was designed to compare the outcomes in cases with early vs delayed oral feeding after appendicectomy at Department of Surgery, Sahara Medical College, Narowal from 01-01-2017 to 01-12-2017. In this study the cases undergoing appendicectomy under general anesthesia were selected. The cases in group A were started with oral feed 6 hours after surgery (early) and those in group B with oral intake on next post-operative day (delayed). Then these cases were followed for various outcomes.

Results: In this present study there were 60 cases in each group with mean age of 23.67±4.57 vs 22.61±4.71 in group A and B respectively. Mean time for first liquid was 6.13±0.43 vs 26.39±2.31 hours and mean time for solid was 22.77±3.11 vs 31.73±4.19 hours in early (A) vs delayed (B) groups respectively. There was significantly lesser time for first bowel sound, first flatus and time for ambulation in group A as compared to group B. Mean hospital stay in group A and B was 2.03±0.31 vs 3.95±1.11 days with p= 0.001. **Conclusion:** Early feeding is better than traditional late feeding and this difference is significantly better in terms of mean ambulation time, appearance of first bowel sound, time for first flatus and mean hospital stay.

Keywords: Early, Delayed feeding, bowel sound, hospital stay, appendicectomy

INTRODUCTION

Abdominal surgeries are one of the major portions of overall surgeries carried out in the general as well as gynaecological surgeries. Interaction with the gut in the form of appendicectomy, colorectal surgeries, anastomosis formation and stoma reversal have a concern regarding the time of resumption of oral feed due to fear of complications¹⁻².

The major feared complications after the resumption of oral feed are nausea, vomiting, abdominal pain, anastomotic leak, prolonged postoperative ileus, effect on time of return of bowel sounds, mobilization, hospital stay etc.³⁻⁴ That's why there is always an ongoing debate regarding the type and time of resuming oral feed. The data has shown that enteral feed is better than parenteral one, but there is controversy regarding the time of oral intake. The two widely deployed modalities for resumption of enteral feeding are early and delayed one where in the former one, it is usually started at six hours and in the latter one after 1st post-operative day or return of bowel sounds on auscultation⁵⁻⁶.

The recent data has supported that majority of the concerns shown in past are no more than a myth and rather early feeding has positive impact on various surgical outcomes, especially in the form of early mobilization and return of gut movement thus reducing the overall cost of hospital stay and surgery⁷⁻⁸.

The objective was to compare the outcomes in cases with early vs delayed oral feeding after appendicectomy.

Received on 14-01-2019

Accepted on 21-06-2019

MATERIAL & METHODS

This was a randomized controlled clinical trial carried out at Department of Surgery, Sahara Medical College, Narowal during 01-01-2017 to 01-12-2017. In this study 120 cases were included (60 in each group) irrespective of gender, aged more than 12 years. The cases were diagnosed clinically as appendicitis based on Alvarado scoring system and appendicectomy was performed under general anesthesia. The cases of both open and laparoscopic procedures were enrolled. The cases that had associated end stage renal or liver failure were excluded from this study. The cases were divided into two equal groups by random number allocation method. The cases in group A were started with oral feed 6 hours after the surgery and those in group B or delayed feed group were started with oral intake on next post-operative day. Then these cases were followed for various outcomes.

Statistical Analysis: SPSS 21.0 was used for data analysis. Both the groups were compared by using independent sample t test for continuous variables and chi square test for categorical variables and post stratification p value ≤0.05 was taken as significant.

RESULTS

In this present study there were 60 cases in each group with mean age of 23.67±4.57 vs 22.61±4.71 in group A and B respectively. Mean time for first liquid was 6.13±0.43 vs 26.39±2.31 hours and mean time for solid was 22.77±3.11 vs 31.73±4.19 hours in early (A) vs delayed (B) groups respectively as in table I. There was significantly lesser time for

first bowel sound, first flatus and time for ambulation in group A as compared to group B. Mean hospital stay in group A and B was 2.03±0.31 vs 3.95±1.11 days with p= 0.001. However, vomiting and mild ileus were higher in early feeding group, but that was not statistically significant and was seen in 5% vs 1.67% and 11.67% vs 6.67% with p values of 0.11 and 0.21 respectively as shown in table II.

Table I. Study variables (n= 60 in each group)

Variables	Group A Early	Group B Delayed
Age (years)	23.67±4.57	22.61±4.71
BMI (kg/m ²)	23.69±2.51	23.42±2.37
Duration of symptoms (hours)	12.67±6.71	12.21±5.37
First liquid intake	6.13±0.43	26.39±2.31
First solid intake	22.77±3.11	31.73±4.19

Table II. Outcome comparison

Outcomes	Group		p
	A (Early)	B (Delayed)	
Time taken for bowel sound	21.81±3.13	33.45±5.19	0.001
Time for first flatus	25.11±2.37	28.51±3.97	0.02
Time for ambulation	11.91±3.17	25.31±5.71	0.001
Mean hospital stay	2.03±0.31	3.95±1.11	0.001
Vomiting	3 (5%)	1 (1.67%)	0.11
Mild Ileus	7 (11.67%)	4 (6.67%)	0.21
SSI	5 (8.33%)	5 (8.33%)	1.0

DISCUSSION

Feeding is an important concern after the surgical interventions especially dealing with intestine. There is always controversy regarding its time of start and its association with various favourable and unfavourable outcomes. Delayed feeding or feeding after the first 24 hours of surgery is the most widely practiced traditional technique, but it sometimes adds to apprehension in patients to fast such long and add to overall cost. There are number of studies carried out in this context to look for the better modality with variable result⁹⁻¹⁰.

In the present study favourable outcome were seen with early enteral feeding where, there was significantly lesser time for first bowel sound, first flatus and time for ambulation. Moreover, mean hospital stay was 2.03±0.31 vs 3.95±1.11 days with p= 0.001, which was also significantly lesser in early feeding group. These results were comparable to the findings of the previous studies where early feeding was either better or equivalent to the late feed groups and there were no major side effects noted¹¹⁻¹².

According to a study done by Anderson HK et al on 1173 cases, it was seen that there was no statistical difference in both groups in terms of complication rate.¹³ In another meta-analysis carried out by assessing 23 randomized controlled trials revealed that enteral feeding was better as compared to parenteral feeding and there was extra risk of complications in early vs delayed feeding technique¹⁴.

Mazaki et. al also described that mean time for ambulation and bowel sound was significantly better in early feeding groups with p <0.05¹⁴ and similar was seen by the study done by Sheikh IA et. al: where the mean time for first bowel sound was 22±5.84 vs 26±6.72 with p= 0.002 and mean time for hospital stay was 2±0.55 days vs 4±1.2 days with p=<0.001 and they also did not find any significant complication in the early feeding group¹⁵.

Few studies revealed that complications were relatively higher, in early feeding group but that was not statistically

significant as was seen in the present study where vomiting and mild ileus was seen more in early feeding group¹⁶⁻¹⁷. According to a study done by Lee et. al: they found one case (1.8%) to suffer from aspiration pneumonia in early feeding group¹⁷.

CONCLUSION

Early feeding is better than late tradition feeding, this difference is significantly better in terms of mean ambulation time, appearance of first bowel sound, time for first flatus and mean hospital stay thereby reducing the overall cost of surgery.

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