ORIGINAL ARTICLE

To Evaluate Early Feed vs Late Feed in Post-lower-segment Cesarean Section Patients at a Tertiary Care Center: A Randomized Controlled Study

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Received on: 28 December 2022; *Accepted on*: 27 March 2023; *Published on*: 16 September 2023

Abstract

Background: Cesarean section is one of the routinely performed surgeries in gynecology and obstetrics. Deliveries done by cesarean section have been seen to impact the postoperative feed in women. Usually, postdelivery by cesarean section the woman is given food through intravenous (IV). The feed is not given to the mother by mouth for some amount of time which is based on the opinion of different clinicians and hospitals. There is an assumption noted that if early feeds are given then the patient might suffer from postoperative ileus. This assumption, however, has not been evidenced by the available literature. It has been noted that early feed aids in faster recovery, quicker wound healing, and early discharge from the hospital. Therefore, early feed postcesarean operation is generally emphasized.

Materials and methods: This was a prospective, single-centre, randomized controlled study conducted over a period of 1 year from 2020–2021. Subjects were randomized into group I (early feed) and group II (late feed). Various parameters were assessed and compared statistically in both groups.

Results: Various functions and complications of gastrointestinal indications and psychosomatic parameters related to postoperative cesarean delivery were evaluated, and it was observed that there is no statistically significant difference between the early feed and the late feed.

Conclusion: Early oral intake of food is safe and well tolerated; clinical outcomes are similar to delayed feeding. It does not cause a significant increase in postoperative paralytic ileus, and the results are equally good for patient satisfaction when compared with delayed feeding.

Keywords: Cesarean, Early feed, Late feed, Postoperative ileus, Satisfaction.

Journal of South Asian Federation of Obstetrics and Gynaecology (2023): 10.5005/jp-journals-10006-2265

Introduction

Cesarean section is one of the routinely performed surgeries in gynecology and obstetrics.[1] Deliveries done by cesarean section have been seen to impact the postoperative feed in women. Usually, postdelivery by cesarean section the woman is given food intravenous (IV). Feed is not given to the mother by mouth for some amount of time which is based on the opinion of different clinicians and hospitals.[2] These patients might be given either early or late feed postcesarean operation depending on the clinician's opinion. There is an assumption noted that if early feeds are given then the patient might suffer from postoperative ileus. This assumption, however, has not been evidenced by the available literature.[3] It has been noted that early feed aids in faster recovery, quicker wound healing, and early discharge from the hospital.[4–9] Therefore, early feed postcesarean operation is generally emphasized. Additionally, there are several advantages of early feed like lesser requirement of painkillers, reduced chances of developing sepsis, and quicker return to a regular diet.[8,10,11] Some recent studies have shown that early feed after cesarean delivery is well suited and is accompanied by an easy return to a normal diet.[3,12–15] Even though studies suggest that early feed is suitable after cesarean delivery, still this is not practiced in many institutions. Patients are given feed only after their bowel movements are returned to normal.[16] This study was conducted to evaluate the role of early feeds vs late feeds in post-lower-section cesarean section patients.

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How to cite this article: Choudhari V, Patil Y, Thiyagarajan K, *et al*. To Evaluate Early Feed vs Late Feed in Post-lower-segment Cesarean Section Patients at a Tertiary Care Center: A Randomized Controlled Study. J South Asian Feder Obst Gynae 2023;15(4):385–388.

Source of support: Nil

Conflict of interest: None

Materials and Methods

This study was a prospective, single-centre, randomized, controlled study conducted over a period of 1 year from 2020–2021, in the Department of Obstetrics & Gynaecology, BhaktiVedanta Hospital & Research Institute, Thane, Maharashtra, India. A total of 148 participants were enrolled in the study and 130 were randomized. Eighteen patients' screens failed as they did not meet the eligibility

Table 1: General characteristics of study participants

Characteristic	*Early feeding (n = 65)*	*Delayed Feeding (n = 65)*	*p-value*
Age (years)	24.5 ± 4.9	24.5 ± 4.9	0.64
Parity	1.26 (0–2)	1.45 (0–3)	0.77
Gestational age (weeks)	38.7 ± 1.3	38.5 ± 0.89	0.83

Table 2: Parameters that affect patients undergoing cesarean operation

Parameters	*Characteristic measure*	*Early feeding (n = 65)*	*Early feeding (n = 65)*	*p-value*
Time to flatus (days)	Mean ± SD	1.18 ± 0.76	1.22 ± 0.93	0.69
Time to bowel movement (days)	Mean ± SD	1.49 ± 1.12	1.42 ± 1.16	0.82
Abdominal pain	Percentage	17%	22%	0.95
Vomiting	Percentage	6%	9%	0.33
Abdominal distension	Percentage	25%	29%	0.26
Nausea	Percentage	22%	26%	0.14
Length of hospital stay	Mean ± SD	2.02 ± 0.78	2.32 ± 0.91	0.24

SD, standard deviation

Table 3: Additional psychosomatic factors potentially impacting patients undergoing cesarean surgery (3-day observation)

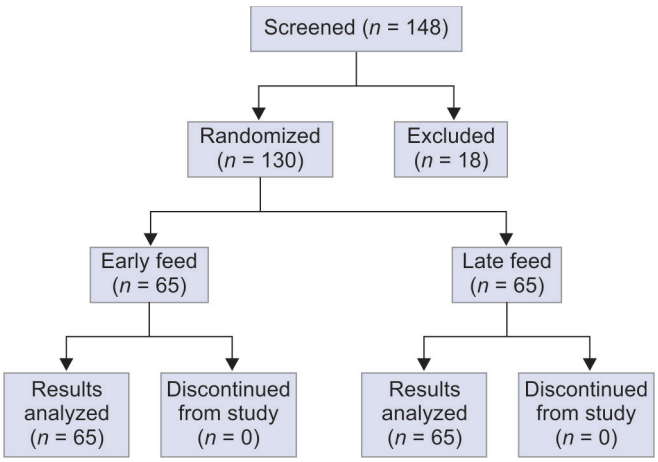
		Day 1		*Day 2*		*Day 3*	
S. No.	*Parameters*	*Early feed*	*Late feed*	*Early feed*	*Late feed*	*Early feed*	*Late feed*
1	Able to breath easily	56 (86.15%)	62 (95.38%)	58 (89.23%)	64 (98.46%)	57 (87.69%)	64 (98.46%)
2	Any severe pain	13 (20%)	8 (12.31%)	10 (15.38%)	10 (15.38%)	10 (15.38%)	5 (7.69%)
3	Able to pass urine	54 (83.07%)	60 (92.31%)	61 (93.84%)	61 (93.84%)	62 (95.38%)	61 (93.84%)
4	vomiting/retching	4 (6.15%)	0 (0%)	2 (3.08%)	2 (3.08%)	2 (3.08%)	1 (1.54%)
5	Diarrhea	1 (1.56%)	2 (3.07%)	2 (3.08%)	2 (3.08%)	4 (6.16%)	5 (7.69%)
6	muscle pain	16 (24%)	12 (18.46%)	11 (16.92%)	11 (16.92%)	9 (13.86%)	10 (15.38%)
7	Trouble falling asleep	18 (27.62%)	22 (33.85%)	21 (32.31%)	21 (32.31%)	20 (30.76%)	15 (23.07%)
8	Leg cramps	20 (30.77%)	15 (23.07%)	19 (29.23%)	16 (24.62%)	19 (29.23%)	16 (24.62%)
9	Feeling rested	51 (79.68%)	55 (84.62%)	51 (78.46%)	58 (89.23%)	52 (80%)	57 (87.69%)
10	Feeling depressed	3 (4.62%)	1 (1.54%)	2 (3.08%)	1 (1.54%)	1 (1.54%)	2 (3.08%)
11	Backache	23 (3.38%)	12 (18.46%)	18 (27.69%)	10 (15.38%)	22 (33.84%)	14 (21.56%)
12	Feeling happy	62 (95.38%)	64 (98.46%)	63 (96.92%)	64 (98.46%)	64 (98.46%)	63 (96.92%)

criteria of the study. The participants were randomized into two groups, namely, group I (early feed) and group II (late feed), and the allocation sequence was developed as per simple randomization with the help of a computer. The allocated sequence was carefully placed in sealed envelopes in sequential order. The sealed envelope was drawn sequentially by the research coordinator who was unaware of the randomization order. Consent for voluntary study participation was taken prior to the lower segment cesarean section procedure. After consent, the investigator was handed over the envelope which contains the randomized sequence and participants were accordingly assigned to either group I or group II. The number of women assigned to group I was 65 who were offered late food after 7–9 hours and were offered a soft diet between 12 and 24 hours, whereas the number of women assigned to group II was 65 who were offered early food and liquid between 4 and 6 hours and were offered soft diet between 6 and 8 hours. The objective of this study was to evaluate early feeds vs late feeds in patients who underwent lower-section cesarean section by evaluating various parameters related to the gastrointestinal system and psychosomatic parameters related to postoperative cesarean delivery. The parameters like age, parity, gestational age, time to flatus, time to bowel movement, abdominal pain, vomiting, mood, and any other related complications as mentioned in Tables 1 to 3 were assessed and compared statistically in both groups. Statistical Package for the Social Sciences (SPSS), version 27, software was used for data analysis, and the p values were calculated; $p < 0.05$ was considered statistically significant.

Results

The patients were categorized into two groups, one group received early feed and the other group received late feed. Each group had an equal number of patients ($n = 65$) (Figure 1). General characteristics of study participants such as age, parity, and gestational age were noted and compared between both groups, and no statistically significant difference was observed (Table 1). Various parameters such as time to flatus, time to bowel movement, abdominal pain, vomiting, abdominal distension, and nausea were noted for both early feed and late feed (Table 2) and were found to be statistically not significant. The length of the hospital stay in patients who

Fig. 1: Flowchart of the number of patients analyzed



received early feed was 2.02 ± 0.78 days and in patients who received late feed it was 2.32 ± 0.91 days which is also comparable in both groups. In addition to the above-stated parameters, a questionnaire was developed, validated, and implemented in patients of both groups to study various psychosomatic parameters. Various additional psychosomatic factors potentially impacting patients undergoing cesarean surgery such as the ability to breathe easily, trouble in falling asleep, the incidence of pain, mood, and other factors that affect patients undergoing cesarean operation were noted down. These parameters were noted for three days starting from admission day, and it was observed that there is no statistically significant difference in early feed and late feed (Table 3).

Discussion

There is an assumption that early feed after cesarean delivery increases the chances of developing postoperative ileus.[15] The findings from our study suggest that parameters like time to bowel, abdominal distension, and nausea are only slightly more in late feed than in early feed and they are statistically not significant. In a Nigerian study, no significant difference was noted between early and late feeds in terms of symptoms of postoperative ileus.[15] Similar results were also obtained by a study conducted in Uganda by Adupa et al. which reported no difference in symptoms of postoperative ileus between early and delayed feeding groups. Studies conducted by Patolia et al. and Soriano et al. in the USA and Israel showed comparable incidence of ileus symptoms.[7,8] However, there are several studies that suggest that early feed helps in a quicker return of bowel movements. In a study conducted In India by Malhotra et al., it was observed that complications associated with a postoperative cesarean operation such as the return of sound bowel, passing of flatus, and return of normal diet were lesser in early feed as compared to late feed. In fact, 60% of the women opted for early feed rather than the traditional late feed.[17] A study by Göçmen et al. showed that the time for a sound bowel movement and duration of stay in the hospital was shorter in patients subjected to early feed as compared to late feed.[3] Similar results were also obtained by other studies.[7,18] According to a systematic review and meta-analysis which included data from 14 randomized controlled trials and 3 non-randomized trials reported that early feed did not increase any gastrointestinal complications in comparison with late feed given to patients postcesarean delivery.[19] In our study, the average age, parity, and gestational age came out to be similar in both early and late feed groups. A similar result was also reported in a study conducted in Turkey.[3] Based on the results of the questionnaire in our study it was observed that psychosomatic parameters such as comfort in breathing, trouble in falling asleep, the incidence of pain, and mood were similar in both the groups. In a study by Benhamou et al., the patients who received early feed showed a higher patient satisfaction score as compared to patients who received late feed.[20] Similar results were also obtained in a study conducted by Ogbadua et al. wherein the early-fed patients had comparatively higher levels of satisfaction.[21]

Conclusion

There is no statistical difference in various parameters assessed between the early and late feed. Early feed is well tolerated and does not lead to postoperative ileus. Even the psychosomatic parameters and patient satisfaction are similar in both groups.

Acknowledgments

The authors are highly grateful to Ms. Ria Vijay who contributed to analyzing the data and in drafting the manuscript and Ms. Vrutti Mistry for the manuscript publication.

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