

Early Maternal Feeding Versus Traditional Delayed Feeding After Cesarean Section: A Pilot Study

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Abstract

Background: Due to improved anaesthetic, asepsis, blood transfusion, and antibiotics, caesarean sections are becoming more and more common throughout the world. The patients are typically kept off food or liquids until they pass gas. This study was conducted to determine the acceptability and tolerance of early feeding, as well as any complications or adverse effects.

Methods: In a service hospital, this comparison investigation was carried out. There were two groups of 60 patients each, one of which received early feeding, and the other of which received conventional delayed feeding as is usual in most hospitals. Other indicators and gastrointestinal effects were recorded in both groups and examined.

Results: Each alternate willing case without any exclusion criteria was assigned to a group during the study period. Early feeding was initiated 6 hours after surgery in the trial group, but it wasn't until the control group had passed the flatus. In the study group (20.8 and 33.6 h, respectively), bowel noises and flatus were present earlier than in the control group (30.9 and 48.7 h, respectively). Early feeding has no negative implications or problems.

Conclusion: There is no justification for holding or stopping all feeds as is customary. Without thinking about any negative effects, early feeding should be started. Patients recover quickly after surgery, which increases patient satisfaction and saves money.

1. Introduction

The prevalence of caesarean sections (CS) [1] has increased globally, making them likely the most frequent major abdominal surgeries. The reported incidence ranges from 13 to 39%. China has been

noted as having the highest rates of CS in the world, reaching as high as 50% in specific private settings [2]. The "World Health Organization" [3] states that its acceptable incidence should be between 5 and 15%, but in June 2010 they withdrew their earlier recommendation of 15% CS rate. There is no

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empirical support for an optimal percentage, according to their official statement. The most important thing is that all women who require CS get it. Due to “low transverse uterine and abdominal incisions”, safer and more effective anaesthetic procedures, tight asepsis compliance, the availability of “antibiotics, blood and blood products, and high-quality suture material”, CS has evolved into a procedure that is incredibly safe. Along with eliminating outdated and antiquated non-scientific procedures, other important aspects include a greater understanding of the physiology of wound healing and increased surgical skills. “Caesarean Delivery on Maternal Request (CDMR)” is now widely accepted by medical professionals and institutions because it is so safe [4]. What matters most is that all women who require CS get it. Since its inception, CS has become incredibly safe. This is made possible by low transverse uterine and abdominal incisions, safe and improved anaesthetic procedures, “strict adherence to asepsis, antibiotics”, the availability of “blood and blood products, and high-quality suture material”. Along with eliminating outdated and antiquated non-scientific methods, other important aspects include increased surgical abilities and a greater understanding of the physiology of wound healing. These days, this treatment is so secure that many medical professionals and organisations have accepted “Caesarean Delivery on Maternal Request (CDMR)” [4]. After all abdominal procedures, it was thought that the bowels needed to relax, and that doing so would be hampered by eating. This view was shared not only by the general populace but also by the medical community.

In their study, Masood et al. [5] discovered that 61.6% of the doctors in Obstetrics and Gynecology believed that starting a solid food too soon could cause ileus and wound dehiscence, while 3.4% were concerned about an abdominal rupture. Although it is common practise, there is little scientific support for delaying oral feedings after CS for an extended period of time. Early oral feeding is said to minimise hospital stays, improve patient happiness, and aid in

early mobilisation. “The daily cost of intravenous fluids, intravenous sets, cannulas, and nursing care is significantly higher than the cost of oral feeding. This pilot study was undertaken to introduce early oral feeding in uncomplicated CS, and to find out the acceptability, tolerability, gastrointestinal outcomes, compared with traditional delayed feeding”.

2. Materials and Methods

This pilot study was carried out in a tertiary hospital of the “Indian Armed Forces” with the intention of determining the “acceptability, tolerability, and benefits of early oral feeding”, if any, and to compare with those who were started on delayed feeding as has been done historically. The two groups' gastrointestinal results were examined to determine whether there were any significant differences. The study was carried out over a six-month period after receiving approval from the institutional ethics committee. The postoperative ward personnel were initially informed about the project. All CS cases performed during the study period, whether elective or emergency, regardless of the gestational stage, whether under regional or general anesthesia, were offered to participate in the study without any exclusion criteria. After gaining informed consent, those who were willing were enrolled in the study.

In collaboration with a statistician, the sample size was determined by applying the following formula: “Equivalence limit in difference in means = 2, Expected difference = 0, Standard deviation = 4, Effect size = 0.5, Power (%) = 80, and Alpha Error (%) = 5”. Each of the two groups had 60 cases total, and the study-eligible cases were alternately assigned to each group. Six hours following surgery, Group 1 received 50–100 ml of ordinary “water, weak tea, or lime water, depending on the patient's preference”. This was only carried out if the patient was in a stable general state, had normal vital signs, and was not experiencing abdominal pain or nausea. For 4–6 hours, this was repeated every 30–60 minutes based on her preferences and tolerance.

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Table 1: General parameters

Parameter	Subgroup	Group1 (n=60) n (%)	Group2 (n=60) n (%)	P-value
Gravida	Primigravida	22(36.66)	26(43.33%)	0.352
	Multigravida	38(63.33%)	34(56.66%)	
Type of CS	Elective	49(81.66%)	41(68.3%)	0.428
	Emergency	11(18.3%)	19(31.66%)	
Anesthesia	Spinal	56(93.33%)	52(86.66%)	0.196
	Epidural	3(5%)	6(10%)	
	General	1(1.66%)	2(3.33%)	
Age(years)	Mean±SD	21.62±2.9	20.7±3.9	0.038
	Range	19–32	19–42	

Fluids totaling 500–600 ml were given over the course of six hours. After 12 hours of 112, they were served biscuits or toast. The May-June 2017 issue of “The Journal of Obstetrics and Gynecology of India, 67(3): 178-182” Early versus Traditional Breastfeeding 179 surgeries were postponed. After that, the patient was free to decide how to eat. Patients were given a soft diet the following day, or after 24 hours, and if they tolerated it, a normal diet was provided at the following mealtime. If a patient complained of stomach pain, vomiting, or abdominal distension, oral intake was halted. The second group was kept off food for 24 hours, oral fluids began the following day after bowel sounds were confirmed, and solids were only administered once the patient had confirmed passage of flatus. Exclusion criteria included cases of chorioamnionitis, obstructed labour, severe preeclampsia on magnesium sulphate therapy, and impending uterine rupture. For whatever reason, cases where the length of the surgery exceeded 60 minutes were disqualified from the study. All of the patients received routine postoperative monitoring and care, which included abdominal auscultations

every six hours to listen for bowel sounds. It was noted when the first flatus and bowel movement occurred. “Stomach pain, nausea with or without vomiting, the reappearance of bowel noises, constipation, loose stools, or abdominal distension were all observed as gastrointestinal symptoms”. Additional pertinent factors like a “fever of greater than 38 °C”, total “intravenous intake”, and the date of discharge were noted for both groups. Statistics were used to examine any disparities that existed. We questioned each and every patient in Group 1 regarding their acceptance and tolerance of early feeding.

Statistical Analysis

The mean (SD) and categorical variables were assessed together with their corresponding percentages for all the quantitative variables. To determine whether there was a statistically significant difference, scale variables were subjected to the “student’s t-test or Mann-Whitney U test”, while categorical variables were subjected to the “Chi-square/exact Fisher’s test”. SPSS version

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18 was used for all statistical analysis, and a level of significance of p 0.05 was used.

3. Results

“During the study period, 149 cases underwent CS; 16 refused to participate in the study, and 13 others were ineligible because they met one or more exclusion criteria. According to Table 1, the demographic information for the two groups was comparable. To detect the presence of bowel noises, abdominal auscultation was performed every six hours. Bowel sounds could be heard in Group 1 patients within 18 hours in 32 cases and within 24 hours in 28 cases; the average time it took for bowel sounds to appear was 20.8 hours. Adversely, the equivalent numbers in Group 2 were 7 and 14 in 18 and 24 hours, respectively; the average time in Group 2 was 30.9 hours, showing that Group 1's bowel movements were much earlier than those in Group 2. In Groups 1 and 2, the flatus passed after 34.5 and 49.2 hours, respectively. Only 19 people in Group 2 had their bowels moved within 48 hours, compared to 34 instances in Group 1 who did

(statistically significant). After 48 hours, laxatives were given to 13 instances in Group 2 to relieve constipation, while Group 1 only needed laxatives in 2 cases. Enema was not used to treat any cases of constipation. Table 2 displays the frequency of fever, sepsis, postoperative blood transfusion, and paralytic ileus observed in both groups. The average number of intravenous bottles consumed by the two groups was noted; Group 2 consumed a greater number of intravenous bottles”.

4. Discussion

There has long been a concern and a notion that any type of abdominal surgery causes the intestines to become paralysed. According to one study [6], this paralysis can last up to “24 hours in the small intestine, 24–48 hours in the stomach, and 48–72 hours in the colon”. Early oral feeding caused a quick recovery of bowel function, as our investigation had shown. In particular, in simple cases of CS where bowel manipulation is minor, an early eating should alleviate symptoms brought on by intestinal paralysis/dysmobility

Table 2: Postoperative morbidity

Characteristics of study	Group1 (n=60)	Group2 (n=60)	P-value
Fever	5(8.33%)	3(5%)	0.0001
Sepsis	3(5%)	1(1.66%)	—
Post-op blood transfusion	2(3.33%)	2(3.33%)	0.028
IV fluids administered (bottles)	3.6±1.1	5.9±0.7	0.0001
Average time to ambulation (h)	15.8±1.6	21.9±1.4	0.0001

Early oral feeding has definite advantages in this trial. Early feeding is manageable, as evidenced by the similar prevalence of nausea, vomiting, and abdominal pain in both groups. Early feeding does not make digestive issues worse. Although there have been studies where oral feeding has been started as early as 2 hours after surgery [7, 8], in this study it was not until 6 hours had passed. The acceptance and tolerance of early oral feeds have

been mentioned in numerous studies [9, 10] in the literature as being very good. Another benefit was that those who were fed earlier required 4.2 versus 6.1 fewer IV fluid bottles. As indicated in Table 2, the “early feeding group got out of bed earlier (16.3 h) than controls (22.5 h)”. Since such early feeding does not enhance the likelihood of paralytic ileus, there were no cases in either group [11].

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Our findings, which were consistent with those of other investigations, showed that early oral feeding enhances the recovery of gastrointestinal functioning following CS. A meta-analysis of 1800 patients who began early feeding revealed that intestinal motility and function returned more quickly [10]. Even though early feeding is well tolerated and is linked to lower postoperative gastrointestinal morbidity, the majority of hospitals still use the outdated practise of delaying oral fluids until the passage of flatus or the return of bowel sounds. There is a need to bring awareness about advantages of early feeding among the staff catering to postoperative cases, and this should be offered to all women after uncomplicated CS. Since there was no attempt to alter the patient discharge policy, there was no appreciable difference in the overall length of hospitalisation between the two groups. Numerous studies [6, 10, 11] have shown that patients who begin early eating following CS had shorter hospital stays. Both groups' rates of fever and sepsis were comparable (Table 2).

“One of the groups, Group 1, had a very high degree of satisfaction; of the 56 respondents, 14 were unsatisfied. 32 instances in Group 1 had previously undergone CS; 27 of 32 were pleased with the start of early oral feeding. fluids until the passage of flatus or the reappearance of bowel sounds. Early oral intake following an uncomplicated caesarean section under regional anaesthesia is safe and well tolerated; it results in a better outcome than delayed feeding without significantly increasing postoperative morbidity, including paralytic ileus, and it increases patient satisfaction, according to Sumita et al [12]. 's study. Our study also demonstrated that early oral feeding is well tolerated following straightforward CS, whether done under regional or general anaesthesia. There was no unfortunate incident that may explain delaying oral feedings until flatus had passed, as is customary. The impact of early feeding on wound healing and wound complications is one of the main worries [6]. According to a study by Razmjoo et al. [13], this approach does not obstruct wound healing. When patients pass their bowels after any type of operation, they feel relieved and happy. Early meals can increase bowel motions, and chewing gum after surgery is also known to do so [14]. Study's drawbacks include: It was done in the same ward, so

it could not be blinded. Numerous characteristics, such as nausea, abdominal pain, and flatulence, were subjective and were therefore impossible to evaluate scientifically. This was a pilot study; a larger, multicentric study might be more beneficial to patients and alter the widespread practise of depriving them of fluids after CS. Early feeding habits will reduce expenses”.

Conflict of interest

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