

To assess the practices about initiation of Oral Maternal Feeding after Cesarean Section under Regional Anesthesia

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ABSTRACT

Objective: Cesarean Section (C-S) is one of the most commonly performed operations in the world.¹ Diet and nutrition play a vital role in post operative recovery. The objective of the study was to assess the trends and practices about “Early Initiation of Oral Maternal Feeding after Cesarean Section (C-S) under Regional Anesthesia (RA)” and to analyze it in the context of evidence based medicine (EBM).

Methodology: The study was a multi center cross sectional survey conducted from August 2009-September 2010. Closed ended self administered questionnaires were filled in by 398 respondents of obstetric specialty.

Results: In response to the questionnaire 31.3% of the study participants were in favor of early initiation of maternal feeding 2-4 hours; while 84.6% preferred to delay it up to 6-12 hours; 61.6% had the perception that early start of solid diet may lead to ileus and wound dehiscence; whereas 3.4% feared burst abdomen; while only 35.1% said that it would have no effect on wound. About 57% respondents said that early maternal ambulation after an uncomplicated C-S can help in early recovery, while 43% participants thought that it may lead to hypotension, giddiness & spinal headache.

Conclusion: The responses of the participants regarding early initiation of maternal oral feeding after C-S under RA illustrate fears and old conventional trends rather than practices based on scientific evidence. Awareness programs and multi center clinical trials in the local context may change this practice and give them enough experience and confidence. The evidence shows that initiation of early oral maternal feeding (MF) results in greater maternal satisfaction, less gastro intestinal and wound complications and is also cost effective.

KEY WORDS: Maternal Feeding, Cesarean Section, Ileus, Maternal Satisfaction, Wound complications.

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INTRODUCTION

Cesarean Section (C-S) is one of the most commonly performed operations in the world.¹ According to WHO it should be around 5-15%.² However, even if it is estimated to be as low as 10%, around 13 million C-Sections are performed annually. This is equivalent to 24 cesarean deliveries per minute or 34,560 a day. This means that each year a huge number of women deal with

recovering from major surgery. Diet, nutrition and a positive nitrogen balance are important for the health of women in the months following cesarean delivery. The long-standing common post operative feeding trend is to withhold fluid and food after C-S until return of bowel sound or passage of flatus. Although the bowel function is not affected by Regional Anesthesia (RA) whereby there is minimal handling of the guts.³

Most of the time the pregnant woman is kept NPO (Nil Per Os) in the labor ward for long periods, for example the women who are on the operative list for an Elective C-S for the next morning or who end up in C-S after the failed trial of labor.

The policy of introduction of early oral fluid or food versus delayed introduction of food after C-S under RA varies between different hospitals and practitioners, ranging from 12 – 24 hours or more. The validity of this practice of early versus delayed feeding has hardly ever been questioned. In fact the “standing orders” have become the standard practice without enough supporting evidence.

A review of literature which includes Cochrane’s database, has given conflicting evidence about early initiation of maternal feeding after C-S under regional anesthesia (RA).⁴ It would be interesting to know the current trends and practices of Obstetrics & Gynecology (Ob/Gyn) doctors regarding maternal feeding post C-S in local hospital settings. If the practices and perceptions of health providers are known then, awareness programs and multi center clinical trials in the local context may modify the current practices and give them enough experience and confidence to alleviate the apprehensions and fears, associated with early initiation of oral maternal feeding (MF) after C-S.

The objective of the study was to assess the practices of Obstetric practitioners regarding “Early Initiation of Oral Maternal Feeding after C-S under RA” and to analyze it in the context of evidence based medicine (EBM).

METHODOLOGY

The study was a multicenter cross sectional survey conducted at tertiary care hospitals from August 2009 to September 2010. It was conducted at the department of Obstetrics & Gynecology, Liaquat University of Medical Health Sciences Hospital Hyderabad, Countess of Dufferin Fund Hospital Hyderabad, Jinnah Postgraduate Medical Center Karachi and Fatima Bai Hospital Karachi. The Obstetric unit of each of these centers caters more than 7000 deliveries /year with a C-S rate of 15-33%. Ter-

tiary care centers were selected because of the large population size. The trends and practices of these institutions are usually followed by the secondary hospitals. Assuming equal probability of correct and incorrect responses, when $p=0.5$, margin of error 5% and 95% confidence interval, the estimated sample size was 398. Participants were requested to respond to a closed ended questionnaire.

Ethical approval for the study was obtained from Institutional Ethical Review Board. Informed consent was taken from head of the department and the participants of each center. Relevant data were entered in Statistical Package for Social Sciences (SPSS-10.0). Continuous response variables like age and years of experience were presented by Mean \pm SD while qualitative data which include practices and perceptions, were presented by frequencies and percentages.

Study Population: The participants of the study were 398 doctors from Ob/Gyn department. Out of these 39.8% were residents and 60% had postgraduate specialized qualification. Majority (80%) had clinical experience of five years while 12.4% had 6 – 10 years and 7.5% had experience over 10 years. The mean years of obstetric practice were 4.22 ± 5.2 years.

Inclusion Criteria: The inclusion criteria were at least one year of clinical experience in the Ob/Gyn specialty and the doctors who consented to participate in the study.

RESULTS

The respondents were asked about the level of spinal anesthesia, 303 (76.9%) described L3-L4. While 354 (90.8%) described that nerve supply of both lower limbs is usually affected by SA. The 338 (86.4%) of respondents said that mild degree of post operative ileus means complete paralysis of bowel with complete absence of bowel function. Three hundred and four (78.6%) respondents opined that early initiation of maternal feeding would facilitate early initiation of breast feeding.

Only 124 (31.3%) of respondents preferred to start oral MF after 2-4 hours post operatively, while a larger majority of participants 256 (64.6%) were in favor of oral MF after 06-12 hours. About 276 (69.7%) of the respondents had the perception that if liquid diet is started early after C-S, it leads to ileus and abdominal distention while 120 (30.3%) felt that it would have no effect on ileus and abdominal distention.

Two hundred (52.4%) participants replied that solid diet within four hours post C-S may lead to

ileus while, 35 (9.2%) feared wound dehiscence, 13 (3.4%) feared of burst abdomen. About 221 (57%) stated that early MF can help in early ambulation while 166 (43.0%); said that early ambulation may lead to hypotension, giddiness and spinal headache.

About 268 (69%) participants said if fluids were started within 2-4 hours post operatively it may cause nausea and vomiting, while 101 (26%) participants opined that in spite of nausea women should be encouraged to continue taking food. One hundred seventy one (44.8%), respondents said that initiation of early MF may lead to greater maternal satisfaction, while 86 (22.5%) opined that it would result in more patient's discomfort and 84 (22.0%) said that it could lead to delayed recovery of bowel functions.

About 142 (38.9%) participants said that early start of MF is cost effective, whereas 106 (29%) participants felt that it may increase the cost due to complications or readmissions. As regards postoperative complains of women about intense thirst and hunger, 153 (40.3%) of the participants were still in favor of delayed MF, while 189 (49.7%) participants' favored oral water/clear liquids immediately postoperatively.

A majority of the respondents 361 (90.9%) described that liquid diet should be preferred as first food to mothers after C-S, while 319 (82%) of the respondents had the perception that feeding after C-S under RA should be started only after gut sounds are audible or after the passage of flatus, considering these two as the true indicators of return of bowel function after surgery. Two hundred ten (53.7%) participants felt that I/V hydration should be continued even if woman is allowed full diet after C-S. Whereas 77 (19.7%) of the participant' wanted to continue I/V hydration to counter hypotension due to SA.

Two hundred forty seven (63.7%) of the participants said that woman with uncomplicated delivery and EF can be sent home within 48 hours while 130 (33.5%) participants felt that woman should stay in the hospital for at least three days postoperatively.

About 100 (25.5%) of the respondents preferred to retain catheter for 04 – 06 hours to avoid urinary retention, while 115 (29.3%) said to keep the catheter for 12 hours as woman is not allowed to move out of bed before 12 hours and 146 (37.2%) said that catheter should be retained till next day to prevent hypotension due to early ambulation. Only 30 (7.7%) said to remove catheter after 02 – 04 hours to ensure early ambulation of woman. One

hundred sixty nine (43.2%) participants felt that I/V medication should be continued for at least 48 hours after EF and 199 (50.9%) preferred to start oral medication within 12 hours.

DISCUSSION

The World Health Organization (WHO) reviewed six clinical trials designed to study the effects of early versus delayed eating post C-S. WHO found that there were no compelling factors to delay eating a diet of normal food following cesarean surgery.⁵ Current evidence also supports early oral MF after surgery.⁶ There have been great variations in the policies of early initiation of oral MF after C-S under RA in different institutions.

Sweet⁷ is of the opinion that fluid can be allowed soon after operation and light diet may be started when the woman feels ready to eat. According to Gabbe⁸ oral fluids are well tolerated after surgery in the absence of bowel sounds and passage of flatus, only extensive intra-abdominal manipulations or sepsis requires withholding of oral foods.

Contrary to conventional belief, presence of gut sounds is not necessary to start oral feeding. The review of the physiological facts reveals that due to the long Inhibitory Spinal Reflex arc, SA has been demonstrated to either prevent or attenuate the development of ileus.⁹⁻¹¹ Further the actual return of bowel function precedes clinically detectable signs of gut function by at least 24 hours.¹²⁻¹⁴

Due to conventional practices majority of the study participants were in favor of delayed initiation of oral MF after C-S under RA; from 06 hours up to next day. In one of the largest randomized clinical trials¹⁵ the women in early fed group were given their first oral drink 30 minutes after an uneventful period in the recovery area, consequently it resulted in earlier passage of flatus and first stool without an increase in ileus. An alteration in obstetrician behavior and confidence is possible if oral fluids are offered to the patients in immediate postoperative period.

In our study 90.9% of the responders preferred liquid diet as first standard food to mothers after C-S whereas retrospective studies have suggested that a "regular" diet as the first postoperative meal is also tolerated.^{16,17}

The common perception that the nausea and vomiting is because of the very early initiation of fluids is not evidence based. The literature review shows that consumption of food postoperatively might stimulate bowel peristalsis and earlier return of gut function, explaining the decreased nausea in

the early feeding group.¹⁰ Besides the administration of fluids one hour post C-S improved sense of wellbeing and alleviated patient's hunger and thirst.¹⁸

The apprehension about the early initiation of diet post C-S with regards to abdominal distention, wound dehiscence and burst abdomen is not supported by several clinical trials¹⁹⁻²¹ and systematic reviews.^{4,5} There is no evidence that bowel rest and a period of starvation are beneficial for healing of wounds and anastomotic integrity.^{10,19-21} EF is considered safe even in patients who undergo bowel resection and it is not associated with increased post operative gastro intestinal complications.²²⁻²⁴ Besides, EF is as safe as the traditional progressive approach and is associated with higher maternal satisfaction.^{15,20}

The concern of health providers about post operative hypotension, giddiness, spinal headache and urinary retention under RA, may be the major reasons for the prolonged periods of patients' immobilization, catheter retention and continuation of intravenous (I/V) fluids beyond 48 hours post C-S. Whereas several studies show that women recruited in early feeding arm were likely to ambulate earlier and required reduced quantity of parenteral fluids and earlier discontinuation of I/V fluids.²⁵⁻²⁷

The literature reviews and recent guidelines from NICE (August 2006),²⁸ suggest that early initiation of oral MF following C-S is safe and is beneficial for the recovery of woman and her newborn.

CONCLUSION

The responses of the participants regarding early initiation of maternal oral feeding after C-S under RA illustrate fears and old conventional practices rather than scientific rationale and evidence based research. These practices can be modified through awareness programs and multicenter trials in the local context. It can lead to scientific and clinical reassurance that early initiation of maternal oral feeding after C-S under RA is associated with fewer or no gastro intestinal or wound complications and greater maternal satisfaction. This will effectively enhance earlier maternal mobility, well being and may also be cost effective as regards breast feeding, drugs, supplies, services and hospital stay.

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