Study Of Maternal Satisfaction After Caesarean Section Under Subarachnoid Block

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Abstracts: Background and objectives: Subarachnoid block is one of the common mode of anaesthesia opted for emergency caesarean section, if the maternal and fetal conditions are favorable. Various factors influence the quality of care administered during the procedure. Methods: A cross sectional study was carried out in 150 females of the age group 18-40 years undergoing caesarean section under subarachnoid block in medical college in Gujarat. Post-operative survey was conducted on the day of discharge by collecting data on a constructed questionnaire. Positive response to peri-operative care assessment questionnaire was recorded. Result: All the parturients were explained about the anaesthesia prior to surgery , even though 40%remained anxious. With people around them and inside the theatre 97% of them were made comfortable. The problems was shivering (10%), pain (17%), post-operative headache (3%) .100% Parturients heard their baby's cry. 68% mothers slept well after delivery; 83% feed their babies within 4 h of delivery. Conclusion: Our study found that pre-operative communication in emergency caesarean section did not reduce anxiety. Intraoperative psychological support like making the parturients comfortable, showing baby to mother, early breast feeding and adequate pain control essentially contribute to parturients satisfaction. Parturients who had compliant of nausea and vomiting, post operative pain and headache/backache were less satisfied. [Gauri P NJIRM 2017; 8(1): 28-31]

Key Words: Emergency caesarean section, Questionnaire, Parturients satisfaction.

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Introduction: Choice of anesthesia for caesarean section depends on factors like indication of surgery, emergency of operation, parturients and surgeon's desire, and parturients's medical condition.[1]

Subarachnoid block is one of the common modes of anaesthesia opted for emergency caesarean section if the maternal and fetus condition are favorable.[2] Advantages of regional anaesthesia include awake mother, minimal depression of the newborn, and avoidance of the risks of general anaesthesia. Further subarachnoid block anaesthesia specifically has the advantages of its simplicity, small drug dose, low failure rate, and rapid onset.

Parturients undergoing caesarean section will be anxious about the baby and operation theatre which is the new environment for them. However, complications occurring during or after anaesthesia as well as procedure, position, and neuraxial block might be uncomfortable to the parturients.

Recently, regional anaesthesia has gained worldwide acceptance, and its physiological effects provide a better outcome for caesarean section, moreover, general anaesthesia is associated with significantly high maternal morbidity and mortality.[3,4]

Therefore this study was carried out to determine parturients's prospective regarding subarachnoid block anaesthesia and their level of satisfaction during caesarean section under subarachnoid block anaesthesia.

Methods: A cross sectional study was carried out in 150 females of the age group 18-40 years undergoing caesarean section under subarachnoid block in medical college in Gujarat. The risk and complications of both regional and general anesthesia were explained to parturients before surgery and an option was provided to decide the mode of anesthesia.

Exclusion criteria:

1. Refusal of parturients
2. Coagulopathy ,
3. Psychological disorders
4. Parturients not NBM

Parturients were also excluded in case of inadequate or failed subarachnoid block anaesthesia.

Written informed consent was taken. In operation theatre I.V cannula was inserted. All routine monitors were applied. Parturients were pre-medicated by giving rantac 50 mg & emeset 4 mg. Parturients was placed in left lateral position and after identification of L3-L4 inter vertebral space, lumbar puncture was done with midline approach using 23 g Quincke babcock subarachnoid block needle. After free flow of CSF 2 ml of 0.5% hyperbaric bupivacaine was injected and parturients was immediately placed in supine

position. After effective block the surgery was started. At the end of surgery intravenous injection of diclofenac sodium 75mg was given for pain relief. Intra-operative complication including nausea/ vomiting, hypotension, bradycardia and shivering were recorded and symptomatic treatment was given.

Post-operative survey of parturients on the day of discharge was conducted by collecting data on a constructed questionnaire as shown in table 1. The question ranged from communication aspects to peri operative problems. Most of the answers had to be marked yes or no. The questionnaire was completed after an interview by a trained personal who was not directly involved in that parturients's care.

Table 1: The Questionnaire

1. Explained about type of anesthesia and procedure before surgery?
2. Was she anxious before entering the OT?
3. Was she comfortable with the people around and in the theatre?
4. Was she comfortable with the position during spinal?
5. Did she feel pain and anxiety during spinal?
6. How comfortable was she after spinal?
7. Did she have shivering?
8. Did she have breathlessness and pain during surgery?
9. Did she hear her baby cry?
10. Was the baby shown to her?
11. Did she sleep after baby delivery?
12. Did she have pain in the post-operative period?
13. Did she breast feed the baby within 4 hrs?
14. Was there any problem regarding breast feeding?
15. Any problems like headache?
16. Any problems like backache?
17. Any problems like PONV?

The questions were divided under four sub categories (1) assessment of pre-operative care (2) anesthesia care during procedure (3) psychological support during procedure. (4) assessment of post operative care. Positive response to peri-operative care assessment questionnaire was recorded

A four point visual analogue scale was used to rate responses to the questions in areas of post operative backache and PONV. For post operative backache, '1' was taken as no pain and '4' as severe pain. For PONV, '1' was taken for no nausea and vomiting , '2' for only nausea , '3' for vomiting once and '4' for vomiting two or more times. The statistical analysis of data was done by using student's t-test and chi square test was used for difference of proportions. $P<0.05$ was considered significant.

Result: A total of 150 pregnant parturients undergoing emergency caesarean sections were surveyed. Majority of the parturients (78%) were aged between 20 to 30 years, 13% were aged between 31 and 40 years and only 9 % were aged below 20 years. Furthermore, parity distribution revealed that 46% parturients were multigravida, whereas 54% were primigravida.

Positive response to peri-operative care assessment questionnaire was recorded at the time of discharge as shown in table 2.

All the parturients were satisfied with the complete explanations provided by the trained personal regarding anesthesia methods, even though 40% of the parturients remained anxious while entering in operation theatre. With people around 97% parturients were comfortable and all parturients expressed that they were made comfortable inside the theatre.

Immediately after subarachnoid block, 100% of the parturients were comfortable. The only reported problem during surgery was shivering in 10% of parturients.

100% of the parturients heard their baby's cry and 83% of the mothers were shown their babies and all of them slept well after their baby got delivered.

Post-operative complications included mild to moderate pain in 17% of the parturients. Immediately after the surgery, 83% of the parturients had breast feed their baby in the first 4 hrs. inability was due to inadequate milk, nicu admission, inability to suck.

Post-dural puncture headache was noted in 3(2%) parturients which was mild (VAS 2) and was effectively managed with analgesics, complete bed rest and ensuring good hydration. ponv was noted in 5 (3.3%) parturients, out of which 2 (1.3%) parturients had VAS 2 and 3(2%) parturients had VAS 3.

Table:2 Perioperative care assessment questionnaire with positive response(%)

Quality care assessment	Predictor questions	Percentage "yes" response
Assessment of pre-operative care	Explained about type of anesthesia and procedure before surgery?	100
	Was she anxious before entering the OT?	40
	Was she comfortable with the people around in the theatre?	97
Anesthesia care during procedure	Was she comfortable with the position during spinal?	100
	Did she feel pain and anxiety during spinal?	30
	How comfortable was she after spinal?	100
	Did she have shivering?	10
	Did she have breathlessness and pain during surgery?	0
Psychological support during procedure	Did she hear her baby cry?	100
	Was the baby shown to her?	83
	Did she sleep after baby delivery?	68
Assessment of post-operative care	Did she have pain in the post-operative period?	17
	Did she breast feed the baby within 4 hours?	83
	Was there any problem regarding breast feeding?	17
	Any problems like headache ?	3
	Any problems like backache?	0
	Any problems like PONV?	3.3

Discussion: After the introduction in 1898, subarachnoid block anaesthesia quickly gained popularity and despite undergoing highs and lows of time became a favored anesthesia technique for caesarean section worldwide.

The advantages of regional anesthesia (and the risk of general anesthesia) are recognized not only by anesthesiologists but also by the obstetricians. In the 1992 committee opinion publication "anesthesia for emergency deliveries," the risks of failed intubation and aspiration pneumonitis were recognized as serious complications of general anesthesia. This

publication describes the goals to promote the use of regional anesthesia and minimize the need for general anesthesia in obstetric cases.

We took a questionnaire method to assess the maternal satisfaction after caesarean section under subarachnoid block.

A study by porter et al. had mentioned that lack of proper communication between the various medical professionals with the parturient is one of the most important reasons for the overall dissatisfaction among the mothers who undergo caesarean section.[5]

In our study, all parturients had been pre operatively explained about the type of anesthesia and the associated problems in detail. In spite of good communication 40% of the parturients remained anxious. With the people around them and in the operation theatre 97% of the parturients were made comfortable. This showed that proper communication has strong effect on anxiety level and negative outcome of parturients.[6]

Assessment of anesthesia care provided during the procedure is one of the prime factors in allaying the negative outcomes among the parturients. In their study Keogh et al. have showed a strong correlation between the maternal anxiety with negative expectations, fear and post-operative pain[6].Our study showed that 30% of the parturients perceived pain and anxiety during administration of subarachnoid block, which might be due to the constraint on giving sedatives to the parturients before the baby delivery and improper communication by the medical professionals. In spite of anxiety and pain during procedure, 100% of the parturients were comfortable immediately after the spinal. This could be due to reassurance to parturients or because of pain relief by subarachnoid block. The only side effect noted was shivering in 10% of the parturients, which may be mainly due to cold environment in operation theatre and routine measures like covering the parturients properly, giving warm intravenous fluids and medications like tramadol after baby delivery were taken.[7,8]

Several studies have been published discussing the importance of the psychological support and its impact on the parturients undergoing caesarean section and their family.[9,10] Our studies showed that baby cry was heard by all the parturients (100%) and in 83% of parturients the baby was shown immediately after delivery except the babies having complications which need a prompt shift to NICU. 68% of the parturients slept after their baby got delivered.

Mother –child bonding by hearing the baby cry and early breast feeding is also an essential factor in contributing to satisfaction which is possible only under neuraxial block.

The no. of parturients experiencing mild to moderate pain in post operative period, ability to breastfeed their baby within 4 hrs of surgery and the presence of complications such as headache, back pain and PONV was noted. In our study, 17% of the parturients experienced mild to moderate pain in the post-operative period. Pain could be attributed to the parturients movement or a psychological cause. Nearly 83% of parturients were able to breast feed their baby within 4 hrs of delivery. inability to breast feed was due to several reasons such as NICU admission and inadequate milk production. The post operative side effects such as post-dural puncture headache was noted in 3 (2%) parturients which was mild (VAS 2) and was effectively managed with analgesics, complete bed rest and ensuring good hydration. PONV was noted in 5 (3.3%) parturients, out of which 2 (1.3%) parturients had VAS 2 and 3(2%) parturients had VAS 3

Conclusion: Our study found that pre-operative communication in emergency caesarean section did not reduce the anxiety levels. Intra operative psychological support like making the parturients comfortable, showing baby to mother, early breast feeding (improving bonding between child and mother) and adequate pain control essentially contribute to parturients satisfaction. Parturients who had compliant of nausea and vomiting, post operative pain and headache/backache were less satisfied than who had not these compliant. Unacceptability for subarachnoid block anesthesia in the future was due to high incidence of preventable discomforts requiring proper pre operative counseling, psychological support during procedure and peri operative care.

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