

## Study of patient satisfaction and self-expressed problems after emergency caesarean delivery under subarachnoid block

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### ABSTRACT

**Background and Aims:** Subarachnoid block is one of the common modes of anaesthesia opted for emergency caesarean section, if the maternal and foetal conditions are favourable. Various factors influence the quality of care administered during the procedure. This questionnaire based study was undertaken to look for self-expressed problems in peri-operative period in patients undergoing emergency caesarean surgery under subarachnoid block. **Methods:** All the parturients who underwent emergency caesarean section under subarachnoid block during 6 months period were distributed a questionnaire in post-operative period. They were encouraged to fill and return the form within 15 days. Patient satisfaction and the self-expressed problems were analysed at the end of 6 months. **Results:** One hundred and seventy five out of 220 parturients responded. 58.3% of them said that they were explained about the anaesthesia prior to surgery and 85.3% overall remained anxious. With people around them, 93.1% of them felt comfortable and 91.4% expressed that they were made comfortable inside the theatre. The self-expressed problems were shivering (43.4%), breathlessness (21.7%), pain (20%), post-operative headache (15.4%) and backache (19.4%). Parturients who heard their babies cry was 85.1%. After their babies were shown after delivery, 77.1% mothers slept well; 86.9% fed their babies within 4 h of delivery. **Conclusion:** Pre-operative communication in emergency caesarean section by health personnel did not reduce the anxiety level, which shows that communication was ineffective. Intra-operative psychological support like making the patient comfortable, showing baby to mother and early breast feeding improve bonding between child and mother and essentially contribute to patient satisfaction.

**Key words:** Emergency caesarean section, patient satisfaction, subarachnoid block

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### INTRODUCTION

Dramatic rise in the rate of caesarean section is a cause of concern in developing nations like India.<sup>[1]</sup> Subarachnoid block is one of the common modes of anaesthesia opted for emergency caesarean sections if the maternal and foetal conditions are favourable. Parturients undergoing caesarean section will be anxious about the baby and the operation theatre which is a new environment for them.<sup>[2]</sup> Possibly, this might be the first surgery in their life. Problems are

compounded in parturients posted for emergency caesarean section in odd hours. They come across various personnel ranging from theatre assisting staff to doctors. Urgency to conduct the surgery as well as the doctor's busy schedule lead to lack of communication between the health personnel and the patients resulting in negligence of the psychosocial aspects related to the patient.<sup>[3]</sup> The complications of subarachnoid block such as high or inadequate block and minor problems such as nausea, vomiting, shivering as well as the procedure *per se* can be uncomfortable to

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the patient.<sup>[4]</sup> A study by Porter *et al.* suggested that anaesthesia was the single most important factor that leads to unsatisfactory memories of birth.<sup>[5]</sup> Little is known about various other reasons that lead to discontent in the peri-operative period. We studied the effect of psycho-social support given to the patient during emergency caesarean section. To assess the quality of perioperative care, we studied the patient's self-expressed problems within 15 days after caesarean delivery under subarachnoid block.

## METHODS

All the parturients posted for emergency caesarean section under subarachnoid block in a teaching medical school in South India were recruited for the study for a period of 6 months from January 2012 to June 2012 after obtaining institutional permission. The parturients were able to read and write local dialect. Parturients were excluded in case of inadequate or failed spinal anaesthesia or if the caesarean section was performed under general anaesthesia. After filling the patient details, the 18 point questionnaire [Table 1] was handed over to the parturient's responsible relative or next of kin in the post-operative ward. The questions were divided under four sub categories: (1) assessment of pre-operative care (2) anaesthesia care during procedure (3) psychological support during procedure (4) assessment of post-operative care. Parturients were explained about questionnaire

**Table 1: The questionnaire**

1. Were you explained about the type of anaesthesia and the problems before surgery?
2. Were you anxious before entering the theatre?
3. Were you comfortable with the people around you?
4. Were you made comfortable in the theatre?
5. Were you comfortable with the position when spinal is being done?
6. Did you feel pain and anxiety while you were given spinal?
7. Were you comfortable after spinal?
8. Did you have shivering during surgery?
9. Did you have breathlessness during surgery?
10. Did you have pain during surgery?
11. Did you hear baby cry?
12. Was the baby shown to you?
13. Did you sleep after baby delivery?
14. Did you experience moderate or severe pain anytime in the post-operative period?
15. Did you breast feed the baby within 4 h?
16. Was there any problem with regard to breast feeding?  
If yes, what?
17. Do you want to report any problems like headache within these 15 days?
18. Do you want to report any problems like back pain within these 15 days?

given in both English and local language. Most of the answers had to be marked yes or no. The questions ranged from communication aspects to peri-operative problems. Questions regarding the baby outcome were also included in the questionnaire. They were motivated to return the questionnaire in a stamped envelope, which had to be filled up and sent back to the department by post within 15 days of discharge from the hospital. The 15 days gap was allowed for the patient to answer the questionnaire with a stress free mind post-surgery and also avoid the influence of health care provider on them. At the end of 6 months, all the self-expressed problems were analysed.

## RESULTS

A total of 175 parturients responded out of 220 with a response rate of 79.5%. The mean age of parturient was  $25.43 \pm 3.18$  years. The most common indication for emergency caesarean section was foetal distress ( $n = 73$ ). Counselling was done in detail in 58.3% parturients with regard to peri-operative events related to anaesthesia and surgery and 85.3% parturients continued to remain anxious. With people around, 93.1% parturients were comfortable and 91.4% expressed that they were made comfortable inside the theatre. Immediately after the subarachnoid block, 88% of parturients were comfortable. The reported problems and their incidence during surgeries were shivering (43.4%), breathlessness (21.7%) and pain (20%). Parturients who heard their baby cry was 85.1% and 77.1% mothers were shown their babies and all of them slept well after their baby got delivered. Moderate to severe pain during the post-surgical hospital stay was reported by 66.3% parturients. Incidence of generalised head ache and back pain was 15.4% and 19.4% respectively [Table 2]. Immediately after the surgery, 86.9% of the mothers breast fed their babies. Inability to breast feed immediately was attributed to inadequate breast milk ( $n = 18$ ) and transfer of baby to neonatal intensive care post-delivery ( $n = 5$ ) [Table 3].

## DISCUSSION

In general, planned and unplanned caesarean sections are in the rise in the developing countries.<sup>[6]</sup> Caesarean section has a multitude of positive and negative experiences on the mother and the infant's outcome. Various studies have been published commenting and comparing on the psychological and psychosocial impact on mothers undergoing caesarean section and

Table 2: Peri-operative care assessment questionnaire with positive response (%)

Quality care assessment	Predictor questions	Percentage "yes" response
Assessment of pre-operative care	Explained about type of anaesthesia and problems before surgery?	58.3
	Was she anxious before entering the OT?	87.4
	Was she comfortable with the people around?	93.1
	Were you made comfortable in the theatre?	91.4
Anaesthesia care during procedure	Was she comfortable with the position during spinal?	73.1
	Did she feel pain and anxiety during spinal?	74.3
	How comfortable was she after spinal?	88.0
	Did she have shivering during surgery?	43.4
	Did she have breathlessness during surgery?	21.7
	Did she have pain during surgery?	20.0
Psychological support during procedure	Did she hear her baby cry?	85.1
	Was the baby shown to her?	77.1
	Did she sleep after baby delivery?	77.1
Assessment of post-operative care	Did she have pain in the post-operative period?	66.3
	Did she breast feed the baby within 4 hours?	86.9
	Was there any problem regarding breast feeding?	11.4
	Any problems like headache	15.4
	Any problems like backache	19.4

OT – Operation theatre

Table 3: Number (n) of parturients who breast fed their babies and various indications for caesarean section

Study observations	Number of parturients (n)
Inability to early breast feed the baby (n)	23
Baby transferred to NICU	5
Inadequate breast milk	18
Indications for LSCS (n)	
Breech	5
CPD	19
Failed induction	21
Foetal distress	73
Maternal request	6
Oligohydramnios	17
Previous LSCS	9
Others	25

NICU – Neonatal intensive care unit; LSCS – Lower segment caesarean section; CPD – Cephalopelvic disproportion

vaginal delivery.<sup>[5,7-10]</sup> Patient satisfaction is considered to be one of the most important parameters in assessing the quality care in anaesthesia practice.<sup>[11-13]</sup> Pascoe quoted the definition of patient's satisfaction as "a health care recipients" reactions to their care, a reaction that is composed of both a cognitive evaluation and an emotional response."<sup>[14]</sup> We took all this into account and formed a questionnaire method to assess the self-expressed problems in the parturients to identify the reasons for the overall satisfaction or dissatisfaction in those undergoing emergency caesarean section under subarachnoid block. The 15 days gap allowed patient to answer the questionnaire with stress free mind post-surgery and also avoid the influence of health care providers on them.

The 18 point questionnaire was categorized based on the assessment of quality of care as: (1) assessment of pre-operative care (2) anaesthesia care during procedure (3) psychological support during procedure (4) assessment of post-operative care.

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.<sup>[5]</sup> He had also showed that anaesthesia is the single most factor which resulted in poor recollections of birthing process. In our study, only 58.3% of women had been pre-operatively explained about the type of anaesthesia and the associated problems in detail. This could be due to the emergency nature of surgery performed in odd hours.<sup>[15]</sup> Doctor's busy schedule made them neglect the psychosocial aspect of the patient.<sup>[16]</sup> In our study, 73 patients out of 175 patients underwent emergency caesarean section with foetal distress as an indication which explains one of the reasons for the improper communication. It was surprising that 85.3% of the parturients remained anxious in spite of good communication which showed that communication was not effective. With the people around them, 93.1% of parturients were comfortable and 91.4% were made comfortable by the people around them before entering the operation theatre. This showed that psychosocial aspects of patients were taken care of. Anxiety was experienced by 87.4% of parturients before entering the theatre. Our study showed a strong

link between the pre-operative education of a patient and the percentage of parturients being anxious before entering the theatre. A strong association had been found between the increase in anxiety level and negative outcomes in the parturient.<sup>[7]</sup>

Assessment of anaesthesia 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.<sup>[7]</sup> Our study showed that 74.3% of 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 about the procedure. Though a major percentage of parturients experienced pain and anxiety during the procedure, 88% of parturients were comfortable immediately after the spinal. This could be due to reassurance given by health care personnel or because of the pain relief due to subarachnoid block. The side-effects such as shivering (43.4%) and breathlessness (21.7%) during surgery were noted. Shivering in large percentage of parturients may be due to the exposure to the cold environment in operation theatre and routinely measures are undertaken to prevent it by covering the patients properly, giving warm intravenous fluids and medications such as pethidine or tramadol after the baby delivery.<sup>[17,18]</sup> Pain was reported by 20% of parturients during surgery. The discomfort perceived during the uterus exteriorization and the peritoneal retraction were attributed by the patient as pain.<sup>[19]</sup> Early regression of block or prolonged surgery resulting in block regression was not the cause as the anaesthesia records showed adequate level of spinal block and none of the surgery was prolonged.

Several articles have been published discussing the importance of the psychological support and its impact on the parturient undergoing caesarean section and their family.<sup>[7,9,10]</sup> A meta-analysis performed by DiMatteo *et al.* compared the psychosocial outcomes between the mothers undergoing caesarean section and vaginal delivery.<sup>[10]</sup> His findings suggested that immediate and long-term satisfaction with the birth, early and late interaction with their child at hospital and breast feeding the baby were delayed if the mother underwent caesarean section than when she delivered vaginally. Baby cry was heard by 85% of the parturients and 77.1% of times the baby was shown to their

mothers. 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. Ideally, all the babies should be shown to their mothers immediately after the delivery until otherwise the babies have complications which need a prompt shift to neonatal intensive care unit (NICU). In our study, 77.1% of parturients slept after their baby got delivered. Maternal exhaustion due to prolonged labour or happiness after child birth could be the probable reason.

The parturients experiencing moderate to severe pain in post-operative period, ability to breastfeed their baby within 4 h of surgery and the presence of complications such as headache and back pain were noted in our study. Almost 66.3% of parturients experienced moderate to severe pain in the post-operative period. When we evaluated anaesthesia records, all the parturients received injection pethidine and injection diclofenac sodium intravenously according to their body weight immediately after baby delivery. This was followed by regular dosing of these drugs. Probable reason for high incidence of pain could be due to the fact that it was a subjective feeling described after getting discharged from hospital and not the one analysed by pain scale during the period of suffering from pain. Pain could be attributed to the patient movement or a psychological cause. Nearly 86.9% of parturients were able to breast feed their baby within 4 h of delivery. A total of 23 parturients were not able to breast feed their baby within 4 h due to several reasons such as NICU admission and inadequate breast milk. The post-operative side-effects such as headache (15.4%) and back pain (19.4%) were noted. The headache noted in the parturient was a generalised one not fitting into the criteria of post-dural puncture headache.<sup>[20]</sup> Back pain noticed was attributed to position of the patient during subarachnoid block.<sup>[21]</sup>

We analysed the need for quality improvement in percentage for the four sub categories. By communicating properly, 36% improvement can be achieved in the quality of pre-operative care and 33% improvement can be achieved during anaesthesia care during procedure by proper communication and preventing shivering. By proper communication and individualized sedation, 18% improvement can be achieved in providing psychological support during procedure. By proper communication and individualized analgesia, 25% improvement can be achieved in quality of post-operative care.



## CONCLUSION

Our study found that pre-operative communication by health personnel in emergency caesarean section did not reduce the anxiety levels. Intra-operative psychological support like making the patient comfortable, showing baby to mother, early breast feeding (improving bonding between child and mother) and adequate pain control essentially contribute to patient satisfaction. Certain issues such as pre-operative anxiety and post-operative pain assessment were not addressed with precision as the reply to questionnaire was home based.

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## Announcement

### Dr. TN Jha and Dr. KP Chansoriya travel grant

For the year 2014 the Dr. TN Jha and Dr. KP Chansoriya travel grant will be awarded to the participants from 15 states. All the states can select their candidate during their annual conference and send them with the recommendation of the Secretary. Only one candidate is allowed from each state. In case if two states have a combined annual meet but separate conferences as per the records, they have to select one candidate from each state. If more than 15 states recommend the candidates for the award, selection will be made on first come first served basis.

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