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"MATERNAL PERCEPTIONS OF SPINAL ANESTHESIA FOR CESAREAN SECTION: A SATISFACTION STUDY"

Dr.Sneha Susan Koshy[1] , Dr.Balakrishnan[2]

1-Junior Resident, Department of Anesthesiology, Sree Mookambika Institute Of Medical Sciences, Kanyakumari, Tamil Nadu

2-Professor and HOD, Department of Anesthesiology, Sree Mookambika Institute Of Medical Sciences, Kanyakumari, Tamil Nadu

Corresponding Author- Dr.Sneha Susan Koshy, Junior Resident, Department of Anesthesiology, Sree Mookambika Institute Of Medical Sciences, Kanyakumari, Tamil Nadu

ABSTRACT

Background: The use of spinal anesthesia for cesarean section (CS) has significantly increased all over India. Given this trend, there is a need to assess patient satisfaction with spinal anesthesia as an indicator of the quality of reproductive healthcare.

Methodology: This was a prospective observational study conducted in a tertiary care Centre, included parturients in ASA classes II who underwent elective cesarean sections under spinal anesthesia. Patient satisfaction was assessed using a three-point Likert scale. Data were analyzed using IBM SPSS software version 22, with a statistical significance level set at $p < 0.05$.

Results: The study found that the overall satisfaction level of parturients after spinal anesthesia was high at 95%. Satisfaction with various aspects included 83.3% for postoperative nausea and vomiting (PONV) treatment, 90% for intraoperative analgesia and 95% for postoperative care provided by the anesthetist.

Conclusion: Maternal satisfaction with spinal anesthesia in this study was high. This positive outcome can likely be attributed to patients' involvement in the decision-making process, the prompt treatment of complications, and overall quality of anesthetic care provided during the cesarean section.

Keywords: Spinal anesthesia, Parturients' satisfaction, Cesarean section

INTRODUCTION

Spinal anesthesia has become the preferred method for cesarean deliveries due to its numerous advantages over other anesthetic techniques. The safety and comfort it offers to the mother, alongside minimal fetal depression, make it the ideal choice for both elective and emergency cesarean sections. Furthermore, spinal anesthesia provides optimal surgical conditions for the surgeon, contributing to better outcomes and smoother procedures.[1]

The increase in cesarean section rates, both elective and emergency, in countries like India aligns with the global trend of rising spinal anesthesia use. This reflects a shift in obstetric care towards

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safer and more effective anesthesia techniques. The widespread adoption of spinal anesthesia for cesarean deliveries in regions such as the United Kingdom and the West Indies [2] highlights its growing preference worldwide [3]. In some Nigerian hospitals, over 85% of cesarean sections are performed under spinal anesthesia, which underscores its significant role in modern obstetrics.[4]

Spinal anesthesia offers several key advantages over general anesthesia, making it the preferred choice for cesarean deliveries. These benefits include reduced postoperative analgesic requirements, fewer thromboembolic events, higher Apgar scores for the newborn, and, notably, quicker recovery times such as earlier onset of postoperative oral nutrition for the mother [5-7]. These advantages contribute to a smoother and safer recovery, both for the mother and the baby.

Despite these advantages, it is crucial to evaluate maternal satisfaction with spinal anesthesia to identify areas for improvement in the overall quality of healthcare delivery. Patient satisfaction is a subjective and multifaceted concept that goes beyond clinical outcomes [8]. It encompasses physical, emotional, psychological, social, and cultural dimensions, and is influenced by the patient's expectations [9] and experience. Measuring satisfaction can be challenging because it varies widely between individuals and is often shaped by factors like the level of comfort, communication with healthcare providers, and how well potential complications are managed.

Despite its proven benefits, it is important to continue assessing patient satisfaction, addressing complications like shivering, nausea, and dizziness, and optimizing anesthesia practices to ensure the best possible outcomes for both the mother and the baby [10]. Understanding factors such as patient involvement in the decision-making process and prompt management of potential complications is crucial to maintaining high satisfaction levels and improving the overall experience of parturients undergoing cesarean section with spinal anesthesia.

Previous studies on maternal satisfaction with spinal anesthesia during cesarean deliveries have shown varying results. While many developed countries report higher satisfaction rates, studies from several developing African nations have indicated relatively lower levels of maternal satisfaction. [11-12]

Therefore, this study aims to assess the level of maternal satisfaction following spinal anesthesia for cesarean delivery and to identify predictors of dissatisfaction associated with the use of spinal anesthesia. By understanding these factors, we can work toward enhancing the quality of healthcare delivery, ensuring that it aligns more closely with patient needs and expectations. This approach not only aims to improve patient experiences but also fosters better clinical outcomes in the context of maternal and neonatal care.

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MATERIALS AND METHODS

Study design

This prospective, observational study was conducted in Sree Mookambika Institute of Medical Sciences hospital. Sixty female patients scheduled for elective caesarian section were enrolled after providing written informed consent. The study included patients classified as American Society of Anesthesiologists (ASA) physical status II, aged between 25 and 40 years ,following approval from the institutional ethics committee.

The exclusion criteria for the study included several important considerations to ensure a clear assessment of maternal satisfaction with spinal anesthesia for cesarean delivery. Specifically, the following groups of parturients were excluded:

Non-consenting participants: Those who did not agree to participate in the study were excluded to ensure that only willing participants were involved.

Failed spinal anesthesia: Any parturient who experienced a failure of the spinal anesthetic technique and required conversion to general anesthesia was excluded to focus on those who successfully received spinal anesthesia.

Other anesthesia methods: Parturients who underwent delivery using other anesthesia techniques, such as epidural anesthesia, were also excluded to isolate the effects of spinal anesthesia specifically.

Vaginal deliveries: Those who delivered vaginally were excluded, as the focus of the study was solely on cesarean deliveries under spinal anesthesia.

By applying these exclusion criteria, the study aimed to create a more homogenous sample, allowing for a clearer analysis of maternal satisfaction specifically related to spinal anesthesia during cesarean sections. This approach helps to minimize confounding variables and enhance the reliability of the study's findings.

Sample size and Randomization

Based on a previous pilot study and statistical calculations ,a sample size of 30 patients per group was selected to achieve adequate power for the study.

Surgical procedure and anesthesia

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The study enrolled all parturients scheduled for cesarean delivery under spinal anesthesia, specifically focusing on those classified as ASA II. During the pre-anesthetic review, the anesthetists thoroughly explained the spinal anesthetic technique, including potential complications and expected outcomes, ensuring that patients were well-informed.

Before the spinal anesthesia procedure, patients received preloading with 15 ml/kg of Ringer lactate over 15 minutes to help maintain hemodynamic stability. A sterile tray was prepared, and standard aseptic techniques were upheld throughout the procedure. The patient was positioned sitting for the subarachnoid block, with feet placed on a stool to ensure that the hips and knees were flexed and the neck was also flexed.

The skin over the lower back was cleaned with povidone-iodine to minimize infection risk. The spinal anesthesia was administered at the L3/L4 interspace. Prior to the spinal puncture, the site was infiltrated with 2 ml of 1% lidocaine using a 26 ½ local needle. A 25 G Quincke spinal needle was then introduced using a midline approach, and upon observing a continuous free flow of cerebrospinal fluid, 2ml of 0.5% hyperbaric bupivacaine was injected slowly without barbotage.

Postoperatively, in the recovery room, patient satisfaction with the anesthesia was assessed using a questionnaire featuring a five-point Likert scale, which included options ranging from "Very dissatisfied" to "Very satisfied." This approach aimed to capture a comprehensive understanding of the maternal experience regarding spinal anesthesia during cesarean delivery, providing valuable insights for improving healthcare practices.

The study utilized a purposive sampling method, enrolling all consenting patients who met the established inclusion criteria. This approach ensured that the sample was specifically targeted and relevant to the research objectives, allowing for a focused assessment of maternal satisfaction with spinal anesthesia for cesarean delivery. By selecting participants who fit the defined criteria, the study aimed to gather meaningful data that could accurately reflect the experiences and satisfaction levels of parturients undergoing this anesthesia technique.

STATISTICAL ANALYSIS

Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS) version software. o simplify the analysis of patient satisfaction, the five-point Likert scale was condensed into a three-point scale: "Satisfied," "Neither satisfied nor dissatisfied," and "Dissatisfied." This modification facilitated clearer interpretation of the results.

The findings were expressed as means and percentages, with appropriate presentation in tables and figures for better visualization. For comparative analyses, a significance level of p-value

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<0.05 was established, indicating the threshold for determining statistically significant differences between groups. This approach ensured a robust evaluation of maternal satisfaction following spinal anesthesia for cesarean delivery.

RESULTS

The study reported a high overall satisfaction level of 95% among parturients after spinal anesthesia. Specific satisfaction rates included 83.3% for postoperative nausea and vomiting (PONV) treatment, 90% for intraoperative analgesia, and 95% for postoperative care provided by the anesthetist. These findings suggest strong overall satisfaction with anesthesia care during and after the procedure.

	Disatisfied	Neither Satisfied Nor Dissatisfied	Satisfied
Explanation of spinal anesthesia	4	8	48
Decision making for choosing spinal anesthesia.	2	5	53
Injection of spinal anesthesia	3	5	54
Intraoperative pain relief	2	4	54
Satisfaction with spinal anaesthesia.	2	1	57

INTRAOPERATIVE COMPLICATION OF SPINAL ANAESTHESIA EXPERIENCED BY THE PARTURIENTS.	YES	NO
Intraoperative nausea and vomiting	10	50
Intraoperative dizziness	15	45
Intraoperative shivering	15	45

DISCUSSION

Research focused on assessing patient satisfaction during the perioperative period is crucial for enhancing overall patient care and anesthesia-related quality[13,14]. The study considered multiple dimensions [15] for identifying predictors of maternal satisfaction, highlighting that complications and side effects of spinal anesthesia, may influence satisfaction levels. Factors

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contributing to satisfaction or dissatisfaction include interpersonal variations in expectations, available resources, socioeconomic differences, poor communication between patients and staff, inadequate anesthesia, and insufficient postoperative follow-up by the anesthetist. These insights underscore the need for improved communication and tailored care to enhance patient satisfaction.

The study evaluated several aspects of perioperative care that are believed to influence maternal satisfaction. Satisfaction was assessed from multiple perspectives, including:

Preoperative Visit: Quality of information and communication between mothers and the anesthesia provider.

Intraoperative Care: Management and quality of care provided during the procedure.

Postoperative Management: Approaches to care and follow-up after surgery.

Staff Interaction: Overall interactions between staff and parturients.

These dimensions aimed to provide a comprehensive understanding of factors affecting maternal satisfaction in the perioperative period.

In our study ,reported a high overall satisfaction level of 95% among parturients after spinal anesthesia. Specific satisfaction rates included 83.3% for postoperative nausea and vomiting (PONV) treatment, 90% for intraoperative analgesia, and 95% for postoperative care provided by the anesthetist.

The study conducted in Bahawalpur[16] reported an overall satisfaction level of 81.4% among parturients. Specific satisfaction scores included 98.17% for postoperative nausea and vomiting (PONV), 74.09% for intraoperative pain and discomfort, and 76.83% for postoperative backache.

In contrast, a study from Tunisia [17] revealed that 16.4% of participants were dissatisfied with their care related to spinal anesthesia. This dissatisfaction was primarily attributed to complications and side effects associated with the anesthesia. These findings highlight varying levels of satisfaction and the impact of complications on patient experiences across different regions.

CONCLUSION

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In our study, the overall satisfaction with spinal anesthesia reached an impressive 95%. While our ideal target is closer to 100%, this result is particularly encouraging. Several key factors contributed to this high level of satisfaction: the active participation of patients in the decision-making process, prompt management of any complications, and the overall quality of anesthesia care. These elements play a crucial role in ensuring maternal satisfaction following spinal anesthesia for cesarean delivery.

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