

# Perception, attitude, and practice of labor analgesia among obstetric care providers in Eastern Uttar Pradesh



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## ABSTRACT

**Background:** Labor pain is among the foremost severe pain that ladies experience in their lifespan, if inadequately treated can lead to certain complications in labor. Relieving this pain with medical interventions is also full of misconceptions and disagreement among people. Different traditional and pharmacological methods for labor pain relief are utilized by obstetric care providers. **Aims and Objectives:** The aim of the study was to obtain perception, attitude, and practice of labor analgesia among obstetric care providers in Eastern Uttar Pradesh. **Materials and Methods:** A cross-sectional online survey was conducted among obstetric care providers practicing in eastern Uttar Pradesh to access the perception, attitude, and practice of labor analgesia. **Results:** A total of 152 valid responses were obtained from the 250 participants contacted (response rate of 60.8%). The majority (98%) of them were in favor of utilizing some or the other technique of labor pain relief, and 80.3% of the participants were utilizing some of the available methods solely or in combination. Non-pharmacological methods were the most frequently used technique (77.9%). Epidural analgesia was used by only 9.8% of participants. Less awareness among pregnant women, fear of harm to the baby, lack of dedicated supporting staff, and non-availability of anesthesiologists were among the most commonly pointed out as barriers to utilizing labor epidural analgesia. **Conclusion:** The majority of obstetric care providers were in favor of using some or the other technique of labor analgesia, but there was a large gap between the practice and attitude among health-care service providers regarding labor analgesia. Epidural analgesia was practiced very less due to some myths and scarcity of workforce.

**Key words:** Epidural analgesia; Labor analgesia; Labor pain; Obstetric care provider

## INTRODUCTION

Labor pain is among the foremost severe pain that ladies experience in their lifespan.<sup>1</sup> Labor has various effects on the parturient and the fetus, some of them may be deleterious to one or both of them. Labor pain also has emotional and cognitive elements along with the physical component. Ineffective pain relief can lead to certain morbidities and complications during and after labor.<sup>2</sup> It may also result in uterine rupture and neuropsychological problems. At times, it also signals an underlying obstructed labor.<sup>3</sup> Effective management of labor pain leads to a better outcome in terms of a safe baby and greater maternal

satisfaction with the birth process.<sup>4</sup> These observations highlight the need of using labor analgesia services during the delivery process; however, due to different reasons, it is often not available to parturients as per requirements. The World Health Organization has incorporated adequate pain management services in the package of maternity care during delivery respecting their choice, culture, and needs.<sup>5</sup> Obstetricians and midwives come in close contact with pregnant women frequently. During antenatal visits, they should educate expectant mothers about labor analgesia options available with their efficacy, safety, and limitations. This information will help them in decision making to consider these options during delivery.<sup>6</sup> Labor

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ward nurses should also be encouraged to offer labor pain relief services and help willing parturients to avail these services in compliance with American College of Obstetricians and Gynecologists (ACOG) guidelines.<sup>7</sup> The search for an ideal agent and technique to abolish labor pain has attracted the attention and interest of many researchers.<sup>8</sup> Relieving this pain with medical interventions has been affected by varying degree of misconceptions and disagreement among researchers and common people. The idea of painless delivery came into existence by the pioneer work of Hingson and Edward during the early 19<sup>th</sup> century.<sup>9</sup> The practice of epidural analgesia came into existence in the 1960s and currently thought to be the gold standard method of pain relief during labour.<sup>10</sup> It involves accessing epidural space with a small-bore catheter through which continuous infusion or repeated boluses of local anesthetics with or without adjuvants can be administered. This provides excellent analgesia during normal delivery and could also be converted to epidural anesthesia for operative deliveries if needed. Epidural analgesia decreases stress response by abolishing pain resulting in to decreased blood catecholamine levels leading to significantly improved intervillous blood flow in parturients.<sup>11</sup> An ideal labor epidural causes no motor block and minimal sedation which retains the ability of parturients to participate actively in the process of childbirth.<sup>12</sup>

### Aims and objectives

This survey was carried out to evaluate the perception of obstetricians, their attitudes, and the actual practice of labor analgesia in Uttar Pradesh.

## MATERIALS AND METHODS

### Study population

This study was conducted among obstetric care providers practicing in Eastern Uttar Pradesh.

### Study design

This study was a cross-sectional survey using self-administered pretested semi-structured questionnaire.

### Study unit

An obstetric care provider (possessing MS/MD/DGO) practicing in Uttar Pradesh.

### Study tools and methodology

A cross-sectional online survey was conducted among obstetricians practicing in eastern Uttar Pradesh. A semi-structured questionnaire on labor analgesia was designed at the Department of Community Medicine, BRD Medical College, Gorakhpur, in consultation with the principal investigator and coinvestigator. The questionnaire was

prepared after reviewing the literature on similar studies in the English language which is supposed to be understood by the target population as it is the medium of the teaching of medical courses throughout India. The questionnaire was framed to collect information on demography, awareness, attitude, practices, and perceived barriers toward labor analgesia among participants. A pilot study was undertaken to validate the study protocol with a sample of 25 participants and to estimate the approximate time required to complete the Google forms questionnaire. The questionnaire was modified according to feedback obtained from pilot testing to make it appropriate to the target participants. After getting approval for the project from the Ethical Review Committee of BRD Medical College, Gorakhpur, Google form links were sent to practicing obstetricians in eastern Uttar Pradesh for data collection. The aim and modality of the study were briefly explained at the beginning of the above said Google form. Responses from various participants were downloaded in an Excel sheet from Google forms. Analysis of data was done using International Business Machines-Statistical Package for the Social Sciences software version 21. Demographic data and descriptive statistics such as percentage, mean and standard deviation, and utilization of obstetric analgesia were presented in the form of Tables. Thematic analysis of open-ended questions was done to identify perception, attitude, and barriers to utilizing labor analgesia among obstetric care providers.

### Ethical approval

The Institutional Ethics Committee, BRD Medical College, Gorakhpur approved the study vide letter “10/IHEC/2022.”

## RESULTS

A total of 152 valid responses were obtained from the 250 participants contacted (Response rate of 60.8%).

Among 152 responses, four were male and 148 females. The age of the participating obstetricians was between 25 and 67 years with a mean age of 38.4 and a standard deviation of 10. Eighty-two obstetricians (53.9%) were from medical colleges and 70 (46.1%) from private hospitals/nursing homes (Table 1).

All 152 (100%) participating obstetricians are aware of the concept of labor analgesia. The majority (98%) of them were in favor of utilizing some or the other technique of labor pain relief (Table 2). Forty-nine (32.9%) think that it leads to comfortable delivery, 40 (26.9%) felt that labor pain is very difficult to bear and if there is an option to relieve, we all should offer to our patients, 33 (22.1%) perceived

that pain relief will further promote and boost women from opting vaginal route as a mode of delivery and 27 (18.1%) think it as a basic human right. Three (2%) participants were not in favor of labor analgesia, two among the participants opined that labor pain causes a decent of baby and one said that feeling of pain is necessary to instill sense of responsibility and deep love for the new-born. The majority (144; 94.7%) of participants said that they will provide pain relief to parturients if they have resources. Only 17.8% of participants had formal training in labor analgesia in past. Training of obstetricians in labor pain management was significantly associated ( $P=0.017$ ), and the odds ratio for training and utilization of labor analgesia was 6.85.

One hundred and twenty-two (80.3%) of the participants were utilizing some of the available methods solely or in a combination. Non-pharmacological methods were the most frequently used technique (77.9%). Epidural

analgesia was used by only 12 (9.8%) participants. Seven (5.7%) obstetricians were offering labor analgesia to their parturients as a routine and the majority (87.7%) utilized it on maternal request only (Table 3).

Although, 64 (42.1%) of participants think that epidural analgesia is very safe in expert hands but few participants felt that epidural analgesia has some associated complications, as enumerated in Table 4. The most common problem perceived with the use of the epidural technique was the prolongation of labor (26.3%), followed by fetal distress (13.8%) and poor bearing down efforts by parturients (7.2%). About 2% of obstetricians said that it results in a lethargic baby. Eighty-seven (57.2%) participants had very little or no experience about epidural labor analgesia.

When participants were asked about challenges faced in practicing epidural analgesia, few noticeable reasons were obtained. Less awareness among pregnant women, extra cost of care, lack of dedicated supporting workforce, fear of harm to the baby, and non-availability of anesthesiologists were among the most commonly pointed factors (Table 5).

**Table 1: Sociodemographic characteristics of participating obstetricians**

Characteristics	Number (%)
Age (completed year)	
Up-30	42 (27.6)
31-50	90 (59.2)
>50	20 (13.2)
Gender	
Male	4 (2.6)
Female	148 (97.4)
Affiliation	
Medical college	82 (53.9)
Private practitioner/nursing homes	70 (46.1)
Duration of obstetric practice (completed year)	
<5	57 (37.5)
5-10	38 (25)
11-20	35 (23)
>20	22 (14.5)

**Table 2: Perception of participating obstetricians about labor analgesia (n=152)**

Perception of obstetricians	Number (%)	
	Yes	No
Do you know about labor analgesia?	152 (100)	0
Do you think women need pain relief during labor?	149 (98)	3 (2%)
Have you ever been asked to provide pain relief by a parturient?	134 (88.2)	18 (11.8)
Have you ever offered any form of labor analgesia to expectant mothers?	122 (80.3)	30 (19.7)
Would you provide pain relief if you have resources?	144 (94.7)	8 (5.3)
Do you think labor pain relief services should include awareness creation and education for client and care provider?	152 (100)	0
Have you ever counseled a woman about labor analgesia?	93 (61.2)	59 (38.8)
Have you ever been trained in labor pain management?	27 (17.8)	125 (82.2)

## DISCUSSION

Pain during labor is a normal physiological process as a result of forceful uterine contraction, increasing dilation of cervix uteri along with stretching of the vagina, perineum and other pelvic structures.<sup>13</sup> Appropriate obstetric services including anesthesia services must be accessible to all desirous expectant mothers undergoing labor in all

**Table 3: Labor analgesia practices (n=122)**

Labor analgesia practices	No. (%)
Labor analgesia method commonly used by obstetricians (multiple methods)	
Non-pharmacological	95 (77.9)
Systemic analgesia	57 (46.7)
Inhalational	27 (22.1)
Epidural	12 (9.8)
Common indication of labor analgesia used	
Maternal request	107 (87.7)
Offer as a routine to parturients	7 (5.7)
Other	8 (6.6)

**Table 4: Perception about epidural analgesia (multiple answers)**

Complications	Number (%)
No major issues in competent hand	64 (42.1)
It prolongs duration of labor	40 (26.3)
Fetal distress	21 (13.8)
Patient do not bear down	11 (7.2)
Headache, hypotension, and nausea	9 (5.9)
Inadequate analgesia	4 (2.6)
Baby was lethargic	3 (2)
Little/no experience	87 (57.2)

**Table 5: Challenges in utilizing epidural analgesia to parturients (Multiple options possible)**

Challenges	Number (%)
Lack of awareness among parturients	116 (76.3)
Extra cost	104 (68.4)
Lack of dedicated manpower	78 (51.3)
Parturients fear of harm to baby	46 (30.3)
Availability of anesthetist	40 (26.3)
Lack of resources	34 (22.4)
Need for additional monitoring	29 (19.1)
Contraindications	5 (3.3)

maternity hospitals (ACOG).<sup>14</sup> Many referral hospitals also lack established labor analgesia services. Various techniques can be utilized for relieving pain during labor.<sup>15</sup> Non-pharmacological methods were the most frequently used technique (77.9%) in our observation which is higher than a study conducted in Nigeria (56.8%).<sup>16</sup> Epidural analgesia was used by only 12 (9.8%) participants. We found that 98% of participants think women need pain relief during labor which is higher than the study conducted by Gido et al., where only 54.2% of respondents believed so.<sup>17</sup> In our study, seven (5.7%) obstetricians were offering labor analgesia to their parturients as a routine and the majority (87.7%) utilized it on maternal request. While, in another study, labor analgesia was offered as a routine to their all patients by 23% of participants and 75% provided it on maternal request only.<sup>18</sup> Some studies have also reported the uncertainty or straightaway denial to offer labor analgesia to parturients by health-care providers.<sup>19</sup> Lack of expert hands for the initiation and maintenance of epidural, requirement of continuous monitoring, and the extra cost have been attributed to limited usage especially in low-resource settings.<sup>20</sup> Similarly, we also found that less awareness among pregnant women, fear of harm to the baby, lack of resources, busy schedules, and availability of anesthesiologists were among the most commonly pointed out factors. Epidurals are safe in trained hands and it has not been found to increase the incidence of prolonged labor, cesarean sections, or back pain.<sup>21</sup> Similarly, 64 participants (42.1%) in the present study think that epidural analgesia is very safe in expert hands. Some obstetric care providers in this study perceived that epidural analgesia prolongs the duration of labor, hampers bearing down effort and cause fetal distress, and lethargic baby. Epidural analgesia may slightly increase instrumental delivery, but no conclusive evidence is present to establish an association with increased caesarean deliveries, and chronic back pain and Apgar score of new-born.<sup>22</sup> Similarly, another study shows that epidural labor analgesia does not increase the chances of operative delivery or alter the neonatal outcome.<sup>23</sup> Labor may be prolonged to some extent which can be tackled well if very low concentration of local anesthetic is used.<sup>24</sup> Taneja et al., in their clinical audit, emphasized establishing harmony

between obstetricians, anesthesiologists, and parturients. They stressed a joint teaching schedule and/or frequent clinical meets between anesthesiologists and obstetricians.<sup>25</sup> Another study pointed out importance of good rapport and communication between the expectant mother and health-care providers in achieving Respectful Maternity Care and thereby supporting Universal health coverage.<sup>26</sup>

### Limitations of the study

The results may not be generalizable due to small sample size and nonrandom sampling.

## CONCLUSION

This study reveals a large gap between the attitude and practice of obstetric care providers regarding labor analgesia. Obstetric care providers understand that women experience remarkable distress during labor. Adequate pain relief is currently not being practiced as part of routine obstetric care. Lack of resources, shortage of skilled anesthesiologists to practice standard labor analgesia, and absence of clear guidelines were some barriers enumerated by the participants. The inadequate practice of labor analgesia should alert all stakeholders to design pain relief services in their setup to ease expectant mothers. Providers' training in labor analgesia had shown statistical significance with the practice of labor analgesia.

### Recommendations

It is therefore recommended that the knowledge of pregnant women about labor analgesia including epidurals should be improved by appropriate health education. This will help patients in decision-making about labor analgesia. Labor analgesia should be offered to all eligible candidates. Adequate labor analgesia should be regarded and practiced as part of Respectful Maternity Care. Labor analgesia should be offered to cover most of the eligible population, it should be subsidized to cover more pregnant women so that Universal Health coverage become reality as for as respectful and comfortable delivery is concerned.

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**IAK**- Conceptualisation, Google form preparation; **IAK, VA, AKS**- Review of literature; **IAK, AKS**- Data collection and analysis; **IAK, VA, DKS**- Drafting of the manuscript; **DKS, VA**- Critical revision of the manuscript for important intellectual content. All authors agreed the final manuscript.

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