ORIGINAL RESEARCH PAPER
VOLUME-6 | ISSUE-7 | JULY-2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

AWARENESS OF EPIDURAL ANALGESIA FOR PAIN RELIEF DURING LABOR AMONG ANTENATAL WOMAN IN TERTIARY CARE HOSPITAL- A PROSPECTIVE QUESTIONNAIRE BASED STUDY.

Gynaecology

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ABSTRACT

Background: Pain during labor can be effectively relieved by epidural analgesia. Nowadays "Walking epidural" technique is getting popular among urban hospitals. The utilization of this neuraxial technique is of greater concern among semi-urban and rural hospital set up due to lack of awareness about the benefits of receiving epidural analgesia during labor.
Aim & objectives: To determine the awareness about epidural analgesia during labour among antenatal women attending tertiary care hospital in semi-urban area.
Materials & methods: Three hundred antenatal women attending outpatient clinic of our obstetrics and gynaecology department were questioned about the epidural analgesia for pain relief during labor. The questionnaire contained questions including the demographic and parity details. Antenatal women who were planned for elective cesarean delivery were excluded from our study.
Results: All data were analysed using appropriate statistical methods. Most of our study participants were in the age group of 20-25 years and belonged to middle socioeconomic status. Only 11% of antenatal women had awareness about labour analgesia in our study.
Conclusion: We concluded that the knowledge and awareness about labor analgesia is not quiet appreciable among semi-urban antenatal women. It is the duty of health care givers including both medical and paramedical staffs to provide the adequate knowledge about the benefits of epidural analgesia for better maternal and fetal well being.

KEYWORDS:

Labor, Epidural analgesia, Awareness

Introduction:
Pain perception by the parturient is a dynamic process that involves both peripheral and central mechanisms. Many factors have an effect on the degree of pain experienced by a woman during labor, including psychological preparation, emotional support during labor, past experience, the patient's expectation of the birthing process and induction or augmentation of labor with oxytocin. An abnormal presentation (e.g., occiput-posterior) may also cause early labor pain to be more intense. An unacceptably high number of women involuntarily experience severe pain during labor.

In fact, as reported on the McGill pain questionnaire, labor pain is one of the most intense pain that a woman can experience and it typically worse than a toothache, back pain and pain associated with deep laceration. A study of women in the first stage of labor reported that 60% of primiparous women described the pain of uterine contractions as being " unbearable, intolerable, extremely severe or excruciating."1 However, no doubt for most women, childbirth is associated with very severe pain and it often exceeds all expectation.2 As noted by the American College of Obstetricians and Gynecologists (ACOG) and American Society of Anesthesiologists, "There is no other circumstance where it is considered acceptable for a person to experience severe pain, amenable to safe intervention, while under a physician's care" 3,4 Unfortunately, labor represents one of the few circumstances in which the provision of effective analgesia is alleged to interfere with the parturient's and obstetrician's goal (e.g., spontaneous vaginal delivery).

A variety of labor analgesia options are available, including psychoprophylaxis, transcutaneous electrical nerve stimulation (TENS), systemic medication, inhalational techniques and neuraxial blocks. In addition, other regional techniques such as caudal or paracervical block are used infrequently. Among them, lumbar epidural analgesia offers a safe and effective method of pain relief during labor. It is versatile and may be extended to provide anaesthesia for instrumental or operative delivery. Inspite of availability of these techniques, there is a lack of awareness among pregnant women about pain relief for normal labor. With this background we conducted a study about the awareness of epidural analgesia in antenatal women attending our outpatient clinic (semi-urban based teaching hospital) using questionnaire method.

Materials and methods:
This was a prospective cross-sectional study done in the department of obstetrics and gynaecology from January to March 2017. Sample size was determined based on the previous studies. Pregnant women attending our outpatient clinic were included in the study after getting the written informed consent. Those who were planned for elective cesarean delivery were excluded from our study. The study proforma consisted for demographic details, socioeconomic status, parity, opinion and the knowledge of labor analgesia along with previous history of delivery details (in case of multiparous woman). Pain details such as intensity and time duration of pervious labor were collected. The factors such as the choice of labor analgesia for the present delivery and the reasons for not opting for epidural analgesia were collected.

All data were entered in excel sheet and analysed using SPSS software student version 16. Results are represented as percentage. Chi square test was used to analyse the various factors influencing the knowledge of epidural analagesia during labor. P value of < 0.05 was considered statistically significant.

Questionnaire
1. Age of the antenatal woman A) < 20 years B) 20-25 years C) 25-30 years D) > 30 years
2. Religion A) Hindu B) Muslim C) Christian D) Others
3. Occupation A) Employed B) House wife
4. If employed, nature of employment A) Professional B) Self employed
5. Socio economic status A) Upper B) Upper middle C) Lower middle D) Upper lower E) Lower
6. Educational status: A) Elementary school education B) High school education C) Higher secondary education D) Degree
7. Parity A) Nulliparous B) Multiparous
8. Previous delivery A) Normal vaginal B) Instrumental delivery C) Cesarean delivery
9. Place of previous delivery A) Home B) Primary health care C) Corporate Hospital D) Tertiary care hospital (Medical College)
10. Previous history of labor analgesia A) Yes B) No
11. If yes, rate the previous experience A. Excellent B. Good C. Fair D. Bad
12. Do you have any idea about the methods of pain relief during labor?
13. If yes, list any two methods 1. 2.
14. Do you think that pain during labor can be treated/controlled? A. Yes. B. No.
15. Do you want to have pain relief during labor? A. Yes B. No.
16. If no, specify the reason. _____

Results:

The demographic data are presented in Table 1. Among 300 antenatal women who visited our outpatient antenatal clinic during the study period, majority were in the age group of 20-25 years. Nearly 37% of participants had college education i.e above higher secondary education. Among the study participants only 22% were only employed. Nearly seventy percentage (70%) of antenatal women are primigravida.

The knowledge about labour pain was asked among the primigravida. Nearly 11% study participants had no idea about labour pain. Nearly 89% of study participants had a religious relief and they were strictly against labour pain relief methods. Among multigravida, nearly 60 patients had experienced moderate pain during their previous delivery. And twenty antenatal women experienced severe pain which was unbearable. Only 4% of antenatal mothers want to have epidural analgesia for labour pain relief. Nearly 44% of women were concern about the baby (technique may harm the fetus) and 33% percentage of study participants thought of delay in delivery time. These results are clearly represented in table 3.

Among primigravidae, twenty three patients (11%) felt that labour pain should be relieved. Reasons to opt for pain relief were a) To relieve pain (n=9) b) To relieve stress (n=7) c) To enjoy the experience child birth (n=7). Rest (89%) of the primigravidae felt that the labour pain should not be relieved and most of them gave the reasons which are clearly depicted in table 3.

Table No.1 Demographic details:

Age	No.of patients (n=300)	Percentage (%)
< 20 years	18	6%
20-25 years	223	74.30%
25-30 years	51	17%
> 30 years	8	2.60%
Educational status		
Elementary	23	7.60%
Higher secondary	165	55%
College	108	36%
Professional degree	4	1.30%
Parity		
Nulliparous (Primi)	208	69.30%
Multiparous	92	30.70%
Occupation		
Home maker	234	78%
Employed	66	22%

Table 2: Knowledge & awareness about labour analgesia among primigravida

About labour pain	No. of patients (n=208)	Percentage
No idea	23	11%
Pain free	01	<1%
Painful		
Mild in intensity of pain	39	19%
Moderate in intensity of pain	43	20%
Severe in intensity of pain	102	49%
Labour pain should be relieved		
Yes	23	11%
No	185	89%

Figure 1: Labour pain among multigravida during previous pregnancy:

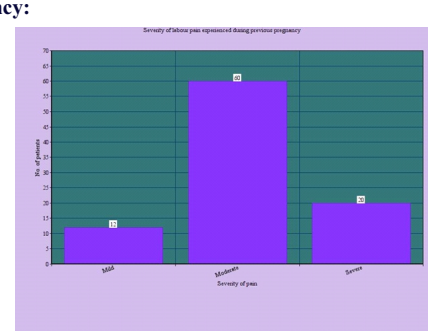

Table No.3 Desire for labour analgesia & concerns about pain relief

Variable	Number (n=300)	Percentage
Do you want labour analgesia?		
Yes	12	4%
No	208	69%
No response	80	27%
Concerns about pain relief		
Baby may be affected	134	44%
Delay in delivery time	98	33%
Possibility of cesarean section	34	11%
Technique may fail	23	8%
Inability to push during labour	11	4%

Discussion:

The American College of Obstetricians and Gynecologists (ACOG) and American Society of Anesthesiologists have stated "in the absence of a medical contraindication, maternal request is a sufficient medical indication for pain relief during labor" and that "decision regarding analgesia should be closely coordinated among the obstetrician, the anesthesiologist, the patient and skilled support personnel. Epidural and spinal analgesia are the most effective methods of intrapartum pain relief in current clinical practice. Epidural analgesia is an appropriate treatment for the pain even during early labor (defined as regular uterine contractions that cause progressive effacement and dilatation of the uterine cervix). Epidural analgesia provides complete pain relief in majority of laboring women.

In a survey of 1000 patients who chose a variety of analgesic techniques for labor and vaginal delivery, pain relief and overall satisfaction with the birth experience were greater in patients who received epidural analgesia.5 Similarly randomized studies that have compared epidural analgesia with systemic opioids and/or inhalation analgesia (i.e nitrous oxide) have shown that pain scores are lesser and patients are more satisfied with epidural analgesia.6-10 The provision of analgesia during labor results in many benefits. Effective epidural analgesia reduces maternal plasma concentration of catecholamines. Decreased alpha and beta adrenergic receptor stimulation may result in improved uteroplacental perfusion and more effective uterine activity. Effective epidural analgesia blunts the "hyperventilation-hypoventilation cycle" in pregnant woman during labor.

Epidural analgesia is not used by all laboring women, although surveys of obstetric anaesthesia practice in the United States have shown that the use of neuraxial analgesia has grown over the past three decades.11 In the United Kingdom, the National Health Service Maternity Statistics for 2005-2006 show that one third of parturients chose neuraxial analgesia during childbirth. In contemporary clinical practice, health care costs have assumed significant importance. Studies published between 2000 and 2002 estimated that the incremental cost to society for providing epidural labor analgesia was $ 260 to 340$ per parturient.

Our study found that only a few percentage of antenatal mothers had an awareness about epidural analgesia for labour pain. None of our study patients had a previous h/o labour analgesia during their past delivery. Only 2% of antenatal women want to have labour analgesia for the present delivery and in the future. Most of the multigravida mothers described the pain intensity was severe and unbearable during their previous labour. In our study most of the antenatal mothers did not want to have epidural analgesia for labour pain and the most common reason being the experience of natural childbirth. This was quiet comparable with other previous similar studies. Since our study was conducted in semi-urban area, majority of the antenatal mothers belonged to lower and middle class socio-economic status.

All antenatal women wanted to know about the technique, cost benefit and risks associated with labour pain relief methods, especially risk to the fetus. Culture and religious issues play an important role in arriving at decision regarding epidural analgesia for labour. This result was quiet comparable with the study done by Barakzai A et.al and Mugambe et.al.12,13 There was no positive correlation between parity and acceptancy of labour epidural analgesia. This was quiet comparable with the study done by Okeke et.el.14 There was a positive correlation between education and negative correlation with age in view of acceptance of labour epidural analgesia. This was quiet

comparable with the result of the study done by Olayemi et.al.15

Mung'ayi Vet.al 16 revealed that fifty percent of the study participants had knowledge about labour pain relief methods. Friends, the antenatal clinic and booklets or leaflets were the major source of information. Most of the studies conducted by Naithani U et.al, Shidhayae RV et.al , Ogboli et.al and Biswas G et.al are similar to our study.17-20 These studies included a survey on awareness, attitude of labour epidural analgesia among different antenatal population. These studies concluded that most of the Indian parturients still suffer from agony of labour pain due to lack of awareness.

James JN et.al21 did a study on awareness and attitudes towards labour pain in urban women attending a private antenatal clinic. They concluded that majority (83.33%) of study participants had no idea about epidural analgesia for labour pain which is very method or technique. This result was well correlated with our study. Poomalar et.al22 revealed the fact that there was a lack of knowledge among pregnant women about pain relief during labour. Due to heavy work load and less resource of man power, it may be difficult to provide one to one care during delivery. This study was done in semiurban population based hospital similar to our study. To create awareness and acceptance of labour analgesia by antenatal mothers, we the health care delivery personnel need to do promotional aspects of labor pain relief methods through mass media coverage information.

Limitation of study:

This study was done during the antenatal visit since majority of antenatal mothers are primigravida who did not experience labor pain. This study would be more informative if the study was conducted during intrapartum and immediate postpartum period.

Conclusion:

Our study concluded that there is a clear cut evidence of unawareness about labour epidural analgesia among antenatal women in semiurban population. Medical and paramedical personnel working in tertiary care centre especially teaching hospital need to educate about the benefits of labour epidural analgesia to pregnant women. And painless labour should be provided to all pregnant women at cost effective manner for happy and safe motherhood.

Acknowlegement: None declared
Conflict of interest: Nil

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