

Acceptance of Epidural Analgesia Depending On Literacy and Parity in A Rural Setting

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Abstract:

Aims and Objectives: Aim of this study was to observe and analyze the acceptance of epidural labour analgesia amongst parturient at rural tertiary care center, depending on their literacy status and parity.

Methodology: After ethical committee approval, 50 pregnant women who were opted for epidural labour analgesia and 50 pregnant women without any pain-relieving modality, were analyzed for their preferences about labour analgesia according to literacy status and parity.

Results: 54 % of graduates opted for epidural as compared to 6 % graduates in the group with no pain-relieving modality. While only 2 % illiterate in epidural group, but 54% of illiterate in group with no pain-relieving modality. Also 70 % of patients were primigravida opting for epidural as compared to 48 % in group with no pain-relieving modality. While 30% multigravida opted for epidural, but 52% of them in group with no pain-relieving modality.

Conclusion: Despite availability of various pain-relieving modality most of the rural population have fear and myths related to painless delivery. However, this study has shown that most literates were accepting epidural labour analgesia as compared to low literacy group. And most of the acceptance was found with primigravida in our study.

Date of Submission: 23-09-2019

Date of Acceptance: 12-10-2019

I. Introduction

One of the most memorable events in any woman's life is giving birth to a child. Despite being a significant life event, some perceives it as a traumatic event and may even experience post-traumatic stress disorder¹. Labour analgesia although used very commonly in the developed world, is not so popular in rural India. Most of the women are not aware of the analgesic options² and even after counselling and informing in detail about painless labour, most of them have fear that nonoccurrence of pain in labour will lead to adverse maternal/ perinatal outcome. The American College of Obstetricians and Gynecologists and the American Society of Anesthesiologists have collectively noted that parturition is the only circumstance in which it is considered acceptable to experience severe pain, amenable to safe relief, while under a physician's care³

Painless labour is practiced almost everywhere in developed⁴ countries and in metropolitan cities of the developing countries. However, in rural areas it's still a struggle to make epidural labour analgesia to be made available to all due to many reasons. As in some cultures, young women had a belief that labour pain is inevitable and natural and that the ability to accept and endure is a sign of womanhood⁵. Some researchers suggest that women who interpret labour pain as fruitful are more likely to feel they can cope as they are motivated by the impending joy associated with delivery of a healthy baby⁴

In this study we aim to find out the acceptance of epidural labour analgesia by women and the correlation with the literacy status of women and their parity.

II. Material and Methods

This prospective comparative study was carried out on patients of Department of Obstetrics & Gynecology at Jawaharlal Nehru Medical College, Wardha from October 2018 to August 2019. A total 100 subjects were for in this study.

Ethical committee clearance was taken prior to starting the study from Institutional Ethical Committee.

Study Design: Prospective observational study

Study Location: This study was done in women attending antenatal clinic at Acharya Vinobha Bhave Rural Hospital, Wardha

Study Duration: October 2018 to August 2019.

Sample size: 100 patients.

Sample size calculation: The sample size was estimated on the basis of number of deliveries occurring per month with 1-2% opting for epidural labour analgesia per month.

Subjects & selection method: 50 patients willing and opted for epidural analgesia were taken as group A while patient who were not willing and not opted for any pain-relieving modality were taken as group B, after fulfilling the inclusion criteria. Demographics and parity of both the groups were compared.

Inclusion criteria:

- 1) Any gravida
- 2) Age- 20-35 yrs
- 3) Body weight < 80 kgs
- 4) POG- 38-42 weeks GA
- 5) Singleton pregnancy
- 6) Vertex as the presenting part
- 7) Cervix >= 4 cms dilated

Exclusion criteria:

1. Cephalopelvic disproportion
2. Malpresentations
3. Previous lscs
4. C/I – epidural analgesia – spinal deformities, local site infections, bleeding abnormalities
5. medical complications – pre eclampsia, eclampsia
6. abnormal fetal heart rate tracing
7. not consenting for epidural analgesia

Procedure methodology

We studied the willingness of patient for epidural analgesia with its literacy status and parity.

III. Result

This study carried out in rural hospital, Acharya Vinobha Bhave Rural Hospital in Wardha. Statistical calculation was carried out by Stastical analysis- SPSS version 22 and Chi square test and students t test.

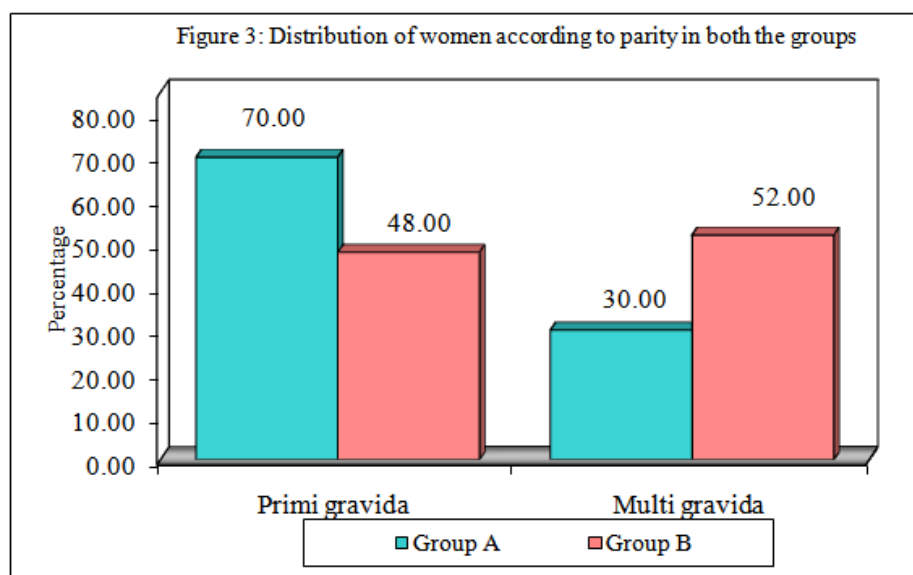
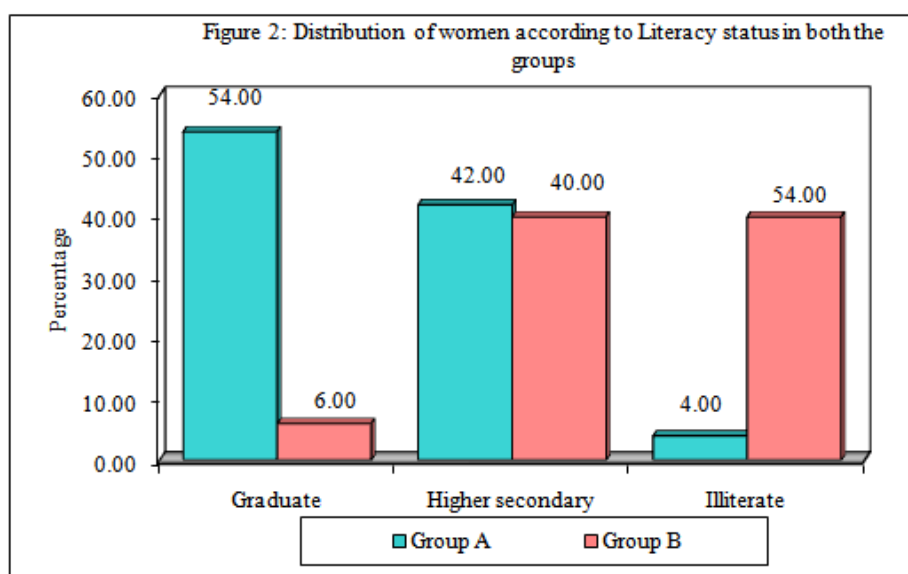
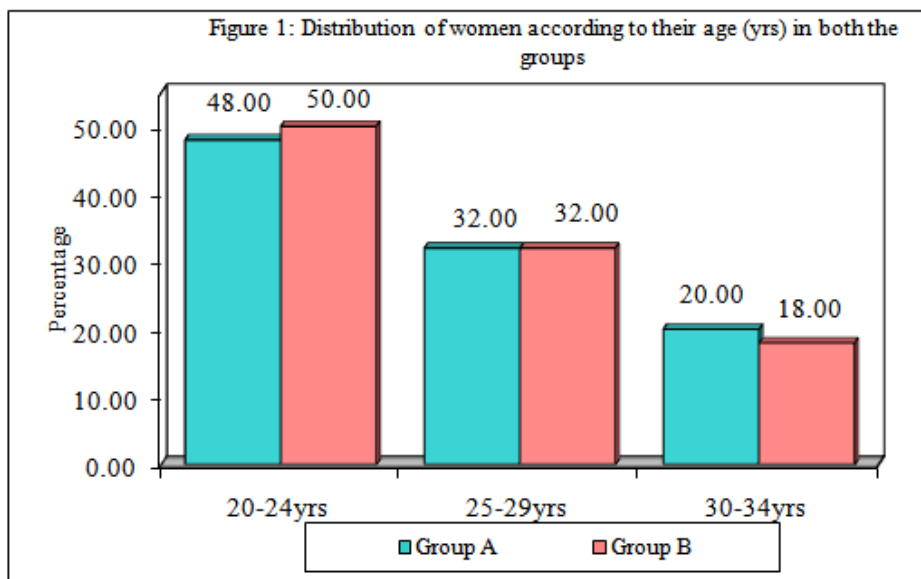
Table 1: Distribution of women as per the age, literacy status and parity.

Variable	Range	Group A	Group B	
Age (years)	20-24	24 (48%)	25 (50%)	Chi-square=0.0731 P= 0.9640,NS
	25-29	16 (32%)	16 (32%)	
	30-34	10 (20%)	9 (18%)	
	Mean age	25.66±3.49	24.62±3.11	
Literacy status	Graduate/Postgraduate	27 (54%)	3 (6%)	Chi-square=34.6774 P = 0.0001*
	Higher secondary	21 (42%)	20 (40%)	
	Illiterate	2 (4%)	27(54%)	
Gravida status	Primigravida	35 (70%)	24 (48%)	Chi-square =5.0021 P = 0.0252*
	Multigravida	15 (30%)	26 (52%)	

Table 1 and figure 1 below describes distribution of women in relation to age in Group A and Group B. It shows 48% of parturient in group A in the age group 20-24 yrs while 50% of group B of age group 20-24 yrs. The mean age in both the groups were comparable and p value was not significant.

Table 1 and figure 2 below describes distribution of women in relation to literacy in Group A and Group B. It shows 54% of graduates accepting epidural labour analgesia in group A while maximum of group B parturient i.e. 54% were in group B. The p value was significant stating that literacy status had an impact on making decision for taking epidural analgesia during labour.

Table 1 and figure 3 shows distribution of women in relation to parity in both the groups. It was observed that 70% of parturient in group A were primigravida as compared to 48% of primigravida in group B, with p value being 0.0252 i.e. significant.



IV. Discussion

The study was conducted in the Department of Obstetrics and Gynecology, Acharya Vinoba Bhave Rural Hospital, Jawaharlal Nehru Medical College Sawangi, Meghe, Wardha, Maharashtra, India, to study the acceptance of epidural analgesia with its literacy status and parity of the patient.

A total of 100 women fulfilling the inclusion criteria were enrolled in the study. Out of which 50 parturient were given epidural analgesia after consent and 50 were devoid of analgesia. Demographics of both the groups were comparable. The observations of this study have been discussed and compared with other studies. The mean age of women in the study group was 25.46 ± 3.60 years against a mean of 25.14 ± 3.55 years in the study group which was comparable to the study done by Desai P et al where mean age was 24.97 ± 3.90 years in epidural group and 25.18 ± 4.08 years in control group. Study done by Paddalwar et al⁶ in which mean age was 23.30 in the epidural group. The mean age in study done by Gambling et al⁵ was 32.7 ± 0.74 years in epidural analgesia group. Fact that later study was carried out in a western country where age at marriage and childbearing is higher compared to our country could be understood in difference in age group.

The literacy status and its relation to epidural was also studied, here in our study, 4% in the GROUP A and 20% in the GROUP B were found to be illiterate; and 42% in the group A and 54% in the group B were found to be higher secondary, 54% in the group A and 6% in the group B were found to be graduates. As this study was conducted in a rural hospital majority of them were found to be graduates. Most of them after counseling and explaining about epidural labour analgesia irrespective of their literacy status had a positive response and were willing for epidural labour analgesia. But majority of them had some religious belief of having labour pains as a gift given by God, while some had myths about neonatal outcome and other myths such pain relief methods could cause harm to neonate in the postnatal period too. The study done by Shidhaye⁷ in the year 2012 had stated that the level of acceptance of epidural analgesia is significantly correlated with the level of education. Another study done at a metropolitan set up in Karachi by Minhas et al⁸ stated that many were already aware of the epidural labour analgesia and demanded for the same; however some had their fears and misconception and hence denied for epidural analgesia during labour.

In group A, 70% of patients were primigravidas as compared to 48% primigravidas in group B. This shows that primigravidas were keener to opt for labour analgesia as compared to multigravidas which were only 30% of them in our study. This is also proven by study done by Melzack et al⁹ which had 25% of primigravidas reporting excruciating labour pain and demanding for labour analgesia however only 9% of multigravidas reported the same in their study. Many of them were surprised to know that painless labour is available at rural set up and had good views on the same post-delivery.

Hence, in a rural Indian setup, it is necessary to create awareness about labour analgesia in parturient which can be easily achieved by training health workers, ANMs, Ashas who are in close contact with the parturient¹⁰.

V. Conclusion

In a rural Indian setup, we came to a conclusion that the level of acceptance of epidural analgesia correlated with level of literacy status. Most of the primigravida opted for labour analgesia as compared to multigravidas with the fear of undergoing through the labour pain. The myth of considering labour pain as fruitful and gift of God should be discouraged and women should be empowered to take their own choices for the beautiful process of delivering the baby.

References

- [1]. Beck CT. A metaethnography of traumatic childbirth and its aftermath: amplifying causal looping. *Qual Health Res.* 2011;21(3):301-311. doi:10.1177/1049732310390698
- [2]. Henry A, Nand SL. Women's antenatal knowledge and plans regarding intrapartum pain management at the Royal Hospital for Women. *Aust N Z J Obstet Gynaecol.* 2004;44(4):314-317. doi:10.1111/j.1479-828X.2004.00230.x
- [3]. ACOG. ACOG Practice Bulletin No. 209: Obstetric Analgesia and Anesthesia. *Obstet Gynecol.* 2019;133(3):e208. doi:10.1097/AOG.0000000000003132
- [4]. Whitburn LY, Jones LE, Davey M-A, Small R. The meaning of labour pain: how the social environment and other contextual factors shape women's experiences. *BMC Pregnancy Childbirth.* 2017;17(1):157. doi:10.1186/s12884-017-1343-3
- [5]. Akadri AA, Odelola OI. Labour pain perception: experiences of Nigerian mothers. *Pan Afr Med J.* 2018;30. doi:10.11604/pamj.2018.30.288.16672
- [6]. Shrivastava S, Nagrale M, Chandak A, Shrivastava D, Papalkar J. A randomized, double-blind, controlled study comparing Bupivacaine 0.125% and Ropivacaine 0.125%, both with Fentanyl 2 µg/ml, for labor epidural analgesia. *Indian J Pain.* 2013;27(3):147. doi:10.4103/0970-5333.124599
- [7]. Shidhaye RV. ORIGINAL ARTICLE – Awareness and attitude of Indian pregnant women towards labour analgesia – Anaesthesia, Pain & Intensive Care. <https://www.apicareonline.com/oldsite/wordpress/original-article-awareness-and-attitude-of-indian-pregnant-women-towards-labour-analgesia/>. Accessed August 20, 2019.
- [8]. Minhas MR, Kamal R, Afshan G, Raheel H. Knowledge, attitude and practice of parturients regarding Epidural Analgesia for labour in a university hospital in Karachi. *JPMA J Pak Med Assoc.* 2005;55(2):63-66.
- [9]. Melzack R, Taenzer P, Feldman P, Kinch R. Labor is still painful after prepared childbirth. *Can Med Assoc J.* 1981;125:357-363.
- [10]. Deogaonkar SG, Natekar S. Awareness and acceptance of labour analgesia in rural india. *Int J Med Res Rev.* 2016;4(12). <http://medresearch.in/index.php/IJMRR/article/view/1087>.