A Descriptive Study to Assess the Awareness and Acceptance of Labor Analgesia in Pregnant Women Admitted for Safe Confinement

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Abstract

Background: Labor pain is very painful. Parturients struggle with agony of pain due to lack of awareness and knowledge. These is significant decrease in acceptance also. *Aims:* Aims to evaluate awareness & to educate for acceptance of labor analgesia in pregnant women. *Methods:* A sample size of 240 pregnant women were included in our study. Each parturient will be counselled and after obtaining a written informed consent the questionnaires will be given which contains questions related to awareness, acceptance, utilization of most common pain relief methods available in the hospital. Results obtained are analyzed by descriptive statistics. Chi-square, Fisher exact test, student *t*-test. SPSS version 21.0 used for calculation. $p < 0.05$ is considered significant. *Results:* Most of the parturients (81%) were not aware of labor pain relief techniques and only 18% were aware. Around 45% did not utlise labor analgesia because of lack of knowledg. Now, after awareness 69% were ready to accept labor analagesia and 39% were not ready to accept. Postcounseling we saw around 13% increase in acceptance. Hence, we found that by creating awareness, there was increase in acceptance for labor analgesia and utilization of labor analgesia techniques. *Conclusion:* Awareness among parturients attending our hospital is found to be less. By providing education and counseling, awareness and acceptance can be increased. Obstetricians and anesthesiologist should work as a team and should ensure utilization of labor analgesia services.

Keywords: Labor pain; Awareness; Acceptance; Labor analgesia.

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Introduction

Labor is intensely painful, however, the time course of pain intensity is highly variable, dynamic and unpredictable.[1] Studies have found that Asian women reported more pain in labor. Most of the Indian parturients still suffer from agony of labor pains due to lack of awareness, unfound fears and lack of availability of labor analgesia service.[2]

Labor pain affects both mother and foetus. Uterine contraction pain evokes a generalized neuroendocrine stress response producing widespread physiological effects during the first stage of labor. They include increased oxygen consumption, hyperventilation and respiratory alkalosis; increased cardiac output, systemic resistance and blood pressure; delayed gastric emptying; impaired uterine contractility and

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diminished uterine perfusion; and metabolic acidemia.[3]

In our hospital 9465 normal deliveries were conducted in the previous year, out of which only 44 (0.46%) utilized labor analgesia services, which is much lower than the published statistics (11%) in India. The reason for such low acceptance inspite of availablility of services in our hospital was not clear. Hence, the present study was designed to know the attitudes of women towards labor pain awareness of labor analgesia and possible benefit of counseling on acceptance of it.

Methods

The study was a descriptive survey conducted between January 2019 and June 2019 in Vani Vilas Hospital attached to Bangalore Medical College and Research Institute, Bangalore. Assuming number of deliveries to be 10000 in current year, that there would be an increase in utilization rate of 6% for labor analgesia after counseling, and an absolute difference 3% a total of 236 parturients were required, to attain a confidence interval of 95%. We included 240 parturients in the survey. Questionnaire used for study was adapted from Shidhaye et al.,[4] and is prepared based on our needs in English language, will be explained in kannada/hindi by researcher. It was validated by sending it to 2 subject experts and 2 language experts. Each questions was scored on a scale of 1 to 5, questions carrying score of 4 or more is included in the questionnaire. It was send to 10 volunteers and their response was assessed. Each pregnant woman will be counseled about the study, after obtaining a written informed consent questionnaire will be given, which contains questions related to awareness, acceptance, utilization of most common pain relief methods available in the hospital. Pain experience will be assessed with Visual Analog Score. Socio economic classification will be done based on BG Prasad classification[5]. Women will then be counseled about the labor analgesia through-Handouts, Short video, discussion with beneficiary, postcounseling acceptance level was assessed and will be asked to answer questions about whether they are willing to use any of the labor analgesia methods during delivery. The researcher was present to answer any doubts. Confidentiality of the patients was maintained. Pain experience was graded with VAS score.

Various knowledge and attitude-related parameters such as perceived severity, nature of labor pain, methods of labor analgesia and perceptions regarding labor analgesia were taken as primary outcome parameters. Practise-related parameters including availing of labor analgesia services in the previous pregnancies and their perceptions about the same were also assessed. All the parameters were presented as frequency and percentages.

The data were also presented in appropriate graphs such as box and whisker plots, pie-charts and bar charts. No inferential statistical analysis was undertaken. Hence, no statistical significance test was used in the study. Information will be collected on computer software programme of SPSS 11 frequencies and percentages calculated to express the results.

Results

The majority (87%) of the antenatal women felt that the labor pain is the worst possible pain and nothing can be done about it. Only 70% of pregnant women said pain should be relieved. Majority of the women 81% were not aware about pain relief methods. Among very few (18%) who came to know about labor analgesia were during previous child birth (59%). The source of information was from doctors, (54%).

The awareness and utilization during previous child birth were 18% and 50% respectively. Reasons for nonutilization were many but majority (45%) was because they did not aware about it. After awareness, presently 69% were wishing to have painless labour. Reasons for nonacceptance were many but majority (47%) were thought its harmful to baby. We could see difference of 13% increase of acceptance rate after counseling. Post counseling, main reason for refusal was due to thought that it may be harmful to baby, (Table 01–17).

Table 1: Demography

Clinical Variables	No. of Patients (*n* = 240)
Age in years	
20–24	89 (37.1%)
25–29	91 (37.9%)
30–34	60 (25.0%)
Education	
No education	0
< 7th	71 (29.6%)
<10th	63 (26.3%)
12th	58 (24.2%)
Graduation & more	48 (20%)

Table 2: Occupation

Occupations	Percentages
Home Maker	187 (77.9%)
Medical Profession Related	0
Nonmedical Profession Related	53 (22.1%)

Table 3: Income

Per capita income	No. of cases
6574 & above	0%
3287–6573	0%
1972–3286	12 (5%)
986–1971	80 (33.33%)

Table 4: Geography

Geographical distribution	No. of cases
Urban	165 (68.8%)
Rural	75 (31.1%)

Table 5: Parity

Parity	No. of cases
1	167 (69.6%)
2	66 (27.5%)
3	7 (2.9%)
4 or more	0

Table 6: Previous delivery

Previous delivery was in	No. of cases
Primary care-center	103 (42.9%)
Secondary carecenter	47 (19.6%)
Teritiary care-centre	77 (32.1%)
Private hospital	11 (4.6%)
Home delivery	2 (0.8%)

Table 7: Severity of pain

Severity of pain in previous labor	No. of cases
No pain	0
Mild	28 (11.7%)
Moderate	140 (58.3)
Severe	56 (23.3%)
Unbearable	16 (6.7)

Table 8: Should pain relieved

Should labor pain be relieved	No. of cases
Yes	168 (70.0%)
No	58 (24.2%)
No opinion	14 (5.8%)

Table 9: Know pain-relief methods

Do you know of labor pain-relief methods	No. of cases
Yes	44 (18.3%)
No	196 (81.7%)

Table 10: Awareness about labor analgesia

When did you come to know about labor analgesia?	No. of cases
Current pregnancy	4 (9.1%)
Previous Pregnancy	8 (18.2%)
Previous child birth	26 (59.1%)
After previous child birth in hospital wards	6 (13.6%)

Table 11: Source of information

What is the source of information?	No. of cases
Media	0
Neighbors/relatives	6 (13.6%)
Anganiwadi workers	0
Doctors	24 (54.5%)
Nurses	14 (31.8%)
Mothers in the wards	0

Table 12: Awareness and utilization

Awareness & utilization of Labor analgesia during previous pregnancies	
Awareness	44/240 (18.3%)
Utilization	22/44 (50%)
Satisfaction with LA	21/22 (95%)

Table 13: Reasons for nonutilization

If no, what is the reason	n = 22
Cost related	1 (4.5%)
Did not know about it before delivery	10 (45.5%)
Service not provided	3 (13.6%)
Harmful to the baby	5 (22.7%)
Refusal by family	3 (13.6%)
Methods do not work	0
Others	0

Table 14: Wish to have presently

Do you wish to have painless labor this time	No. of cases
Yes	167 (69.6%)
No	73 (30.4%)

Table 15: Reasons for nonacceptance

Reasons	n - 73
May harm normal labor	7 (9.6%)
Harmful to the baby	35 (47.9%)
Against the will of God	11 (15.1)
Refusal by family	13 (17.8)
Side-effects later in life	6 (8.2)
No response	1 (1.4%)

Table 16: Pre and postcounseling acceptance

Response	Precounseling	Postcounseling	% Difference
Yes	167 (69.6%)	199 (82.9%)	13.3%
No	73 (30.4%)	41 (17.1%)	

$p < 0.001$ Chi-square.

Table 17: Reasons for refusal after counseling

If no why	n = 41
May harm normal labor	1 (2.4%)
Harmful to the baby	27 (65.9%)
Against the will of God	2 (4.9%)
Refusal by family	6 (14.6%)
Side-effects later in life	4 (9.8%)
No response	1 (2.4%)

Discussion

The mechanism of labor pain has both visceral and somatic component. Uterine contractions, cervical dilatation and stretching of the lower uterine segment are responsible for pain during the first stage of labor. Visceral afferent *C*-type fibers accompanying the sympathetic nerves carry the pain impulses and enter the spinal cord at the T10-L1 levels. In the second stage of labor, somatic afferent fibers from the vagina and perineum convey pain impulses in the pudendal nerves to the S2-S4 spinal nerve roots.[6]

In our study, we had around 240 parturients, most of them were home makers. Regarding education, majority were under seventh grade and only 20 % were graduates. Around 68% were from urban background and 31% were from rural. Majority were primiparous (69%) among them 23% experienced severe pain and 58% had moderate pain. Most of the parturients (81%) were not aware of labor pain relief techniques and only 18% were aware. Most women became aware during their previous child birth. The source of information was available through doctors. 95% were satisfied with local anesthesia during previous child birth. Around 45% did not utlize labor analgesia because of lack of knowledg. Now, after awareness 69% were ready to accept labor analgesia and 39% were not ready to accept. In James JN et al.[6] study shows half of the participants were in favor of using labor analgesia techniques. Postcounseling we saw around 13% increase in acceptance. Postcounseling most common reason for denial was fear of thought of harmful to baby.

However, studies pertaining to this topic are sparse. By creating awareness, we found there was increase in acceptance for labor analgesia. Utilization of labor analgesia techniques can be increased more by creating awareness during ante natal visits by doctors.

Conclusion

Obstetricians and Anesthesiologist should work as a team with consolidated and coordinated approach to help all pregnant women who come for ante natal visits either by counseling or display aids regarding labor analgesia techniques and services available in hospital and should create awareness and address all their concerns and fears. Team must ensure all parturients to utilize the labor analgesia services adequately and efficiently.

Support: Nil

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