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KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING LABOUR ANALGESIA AMONG FAMILIES IN A CITY OF NORTH INDIA.

Medicine

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ABSTRACT

Background : Labor pain is one of the most agonizingly severe and unbearable pain, which a parturient has to bear during child birth. Yet, very commonly, this pain is justified in a male dominated society as an inevitable experience which a parturient must undergo, irrespective of cast, creed, culture and country. Is this pain a reward or punishment for having a child?

Material and methods: To assess knowledge, awareness, attitude and perception that exists today about labor pain and its labor analgesia (LA) in a population of roughly 50000 people. Respondents belonging to the age of 18 yrs and above, in the population, after obtaining willingness, were interviewed randomly by preset questionnaires about various aspects of labor pain.

Results: A total of 1120 people participated in the study and perception, awareness, availability and belief was poor and dismal. 94.2 % were not aware about LA. 60.4% had never heard about labor pain relief. Respondents had various fear and myths about labor pain and relief. Once they were made aware, 96.6% were ready to opt for LA during childbirth.

Conclusion: Perception, awareness, availability and belief is still very poor and dismal and needs more public awareness programmes to dispel various myths and beliefs and to increase awareness.

KEYWORDS

Labor pain, Labor Analgesia, Epidural Analgesia, Caeserian Section, Vaginal Delivery

INTRODUCTION

Natural process of child birth is associated with severe grades of pain termed as labor pain. It can be compared with the worst of pain, as associated with other trauma or pathologies. If not addressed in a scientific manner with the aim to relieve pain in an appropriate and effective manner at the opportune time, it may be associated with adverse impact both on mother as well as child. (1,2)

LA encompasses various pain relief techniques offered to the patient during child birth. These modalities of LA have played an important role in effective pain relief and are very safe to practice. They can be broadly divided in pharmacological and non pharmacological techniques. What type of LA is required or practiced depends upon various factors. (3-5)

Issues associated in developing nations are infrastructure, affordability by patient, skilled and adequate staff availability. An important factor is the pain physician and obstetrician's attitude, skill, knowledge and belief towards pain relief. Several cross-sectional studies have been carried out in past about attitude of the clinician in centres with high volume birth rate and it has been observed that awareness about labor analgesia is dismal. (6, 7)

A mental picture and perception in society about labor pain is frightening. There have been various myths surrounding LA in patients and their relatives since a long time. These could be superstitious, social and medical myths like LA resulting in prolongation of labor. (8)

Various studies have been conducted to evaluate the prevalence of knowledge about epidural labor analgesia on patients attending antenatal clinic which is varying from 7% to 20%. (9, 10) However, none of these studies was conducted in a general population.

This study has been conducted with objectives to evaluate the level of awareness, attitudes and practices of LA among families in a city of North India.

MATERIAL AND METHOD

Study setting - Present community-based cross-sectional study was done in a city of North India from Oct to Dec 2019.

Inclusion and exclusion criteria – Family members aged 18 years and above residing in a city in North India and willing to participate, were included in the study. Individuals with debilitating disease and psychiatric problems were excluded from the study.

Sample size - A sample size of 384 was calculated with alpha error set to 05% and absolute error 05%, however, a total of 1120 participants were approached and interviewed.

We used the following formula to calculate the sample size.

$$n = \frac{(Z\alpha_{/2})\, P(1-P)}{d^2}$$

$Z_{\alpha/2}$=1.96 (as CI is 95% or α=5% or =0.05 and its half is 0.025, its value is taken from table, P=0.50 and 1-P=0.50 d=0.05 (precision level)

$n = (1.96)^2(0.50 * 0.50)/(0.05)^2$
$= 3.8416 * 0.25/(0.05)^2$
$= 0.9604/0.0025$
$= 384$

Data collection - A structured questionnaire was used for the study. A pilot study of 40 participants (10% of the proposed sample size) in the community was conducted to pre-test the questionnaire, and necessary modifications were done. The major domains of the final questionnaire were: socio-demographic profile, knowledge, attitude and practices regarding LA. The pretested structured questionnaire was administered using the interview method. A questionnaire was prepared in English and was translated and explained to patients in their mother tongue. Confidentiality of the participants wasmaintained.

Statistical analysis - The SPSS (version 20 IBM Corp) was used for data analysis. Data were presented as frequencies (percentage). The Chi-square test was used to test the association of knowledge with sociodemographic factors. A value of $P < 0.05$ was considered as statistically significant.

RESULTS

Demographic Profile of Respondents

A total of 1120 people were included in the study, making a response

rate of 100%. Eighty six percent respondents were between the age group of 18 to 38 years, of them 641 (57.2 %) were in the age group of 29-38. Majority of the respondents were female 923 (82.4%) and rest 197 (17.6%) were male. Among the respondents 1024 (91.4 %) were Hindus, 71(6.3) were Muslims and others were 40 (2.2%). Employment wise 876 (78.2%) were homemaker, whereas 166 (14.8%) were students and 78 (7%) were in job. Of the respondents 203 (18.1%) had studied till high-school and 404 (36.1%) had done their intermediate, however, 318 (28.4%) were graduate and 111 (9.9%) were postgraduates and above. Regarding parity 58.8% women were having 2 children and 26.7% had one child (**Table 1**).

Table 1- Demographic Profile of Respondents

Characteristics	Attributes	Frequency (No)	Percentage (%)
Gender	Female	923	82.4
	Male	197	17.6
Age Groups	18-28	317	28.3
	29-38	641	57.2
	39-48	96	8.6
	49-58	53	4.7
	>58	13	1.2
Religion	Hindu	1024	91.4
	Muslim	71	6.3
	Others	25	2.2
Occupation	Home-maker	876	78.2
	Students	166	14.8
	Service	78	7.0
Education	Illiterate	28	2.5
	Primary	11	1.0
	Middle	45	4.0
	High School	203	18.1
	Intermediate	404	36.1
	Graduation	318	28.4
	Post-Graduation & Above	111	9.9
No of Children	0	56	5.0
	1	299	26.7
	2	659	58.8
	3	102	9.1
	4	4	0.4

Knowledge of Labour Analgesia

On asking regarding the intensity of Labour pains 587 (52.4 %) said it is severe, 487 (43.5%) told it is intolerable, 40 (3.6%) said moderate and 06 (0.5%) said it is mild.

When participants were asked that whether they can get rid of Labour pain 39.6% said yes and 60.4% were of opinion that they cannot get rid of it. When asked about what is LA, 5.8 % could only tell about it but 94.2 % of respondents never heard about it.

On asking the about the methods of pain relief 33.8% said caesarean section was the only way to avoid labour pain, 60.4% were not aware of any method only 5.8% said about LA.

Regarding source of awareness when they were enquired 20.9% said Television 10.9% from friends, 5.1% from doctors, 2.7% from radio and rest 60.4% never heard from anyone.

When asked which doctor gives LA 23.5% said obstetrician, 15.7 % said anaesthesiologist, 0.2% said physician, 0.2% said surgeon and 60.4% were not aware who gives it. **(Table 2).**

Table .2 Knowledge of LA among Troops & families

Questions	Response	Frequency	Percentage (%)
What is the intensity of Labour pain?	Mild	06	0.5%
	Moderate	40	3.6%
	Severe	587	52.4%
	Intolerable	487	43.5%
Can we get rid of Labour pain?	Yes	443	39.6
	No	677	60.4
What is the method?	Caesarean Section	378	33.8
	Labour Analgesia	65	5.8
	Don't Know	667	60.4
Have you heard the name of LA?	Yes	65	5.8
	No	1055	94.2
From where you came to know about LA?	Television	234	20.9
	Radio	30	2.7
	Friends	122	10.9
	Doctor	57	5.1
	Not heard from anyone	677	60.4

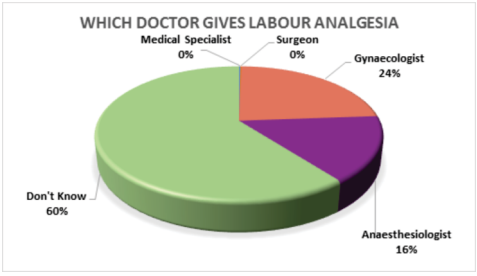

Fig. 1 Awareness regarding which specialist provides LA

On asking about knowledge of side effects of LA, 38.2% of respondents said yes, 4.6 % said no and 57.2% said they don't know. Regarding complications like increased duration of labor, 42.8% said yes and 49.8% said they don't know. On enquiring whether it increases the chance of caesarean section 17.8% said yes 8.6% said no and 73.7% said they don't know. (Table 3)

Table .3 Knowledge of side effects of LA

Questions regarding knowledge of side effects	Response		
	Yes	No	Don't Know
Does this have any side effect?	428 (38.2%)	51 (4.6%)	641 (57.2%)
Does this method increase time of labour?	479 (42.8%)	83 (7.4%)	558 (49.8%)
Does this method increase the chance of Caesarean Section?	199 (17.8%)	96 (8.6%)	825 (73.7%)

Attitude towards LA.

Regarding attitude towards labour pain 0.6% said it occur due to previous sin, 0.5% of opinion it due to punishment of God and 1% thought it is the curse of God for female, however it is heartening to note that around 98% of participants opine it is not due to any of above cause. Around 6% thought that labour pain necessary for child birth, however 67% of opinion it is not necessary but around 27 % are not aware about its necessity, however it does not scare 85% of participants. Around 43% feels if woman bear labour pain in normal delivery then only new born child will be normal but 33% said it is not so, however 24% does not aware about it (Table 4 and Fig. 2)

Table.4 Attitude towards LA among families.

Questions	Response	Frequency	Percentage
In your opinion why a lady has to undergo labour pain?	Previous sin	07	0.6%
	Curse to woman from God	11	1%
	Punishment by God	06	0.5%
	None	1096	97.9%
Does this pain scare you?	Yes	164	14.6%
	No	956	85.4%

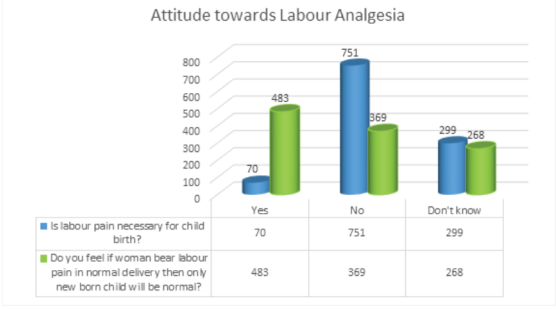

Fig 2- Attitude towards LA

Practices regarding LA

When it was asked, will you opt for LA? It was heartening to note that around 96.6 % of participants were ready to opt for LA and only 3.4% said no. When asked do you feel that caesarean section is better way for pain relief, 86% felt that a woman prefers C-section to avoid pain during labour. When it was asked whether they know anyone who has undergone LA all of them said no, i.e. 100% said they don't anyone who had LA during Childbirth (Fig. 3).

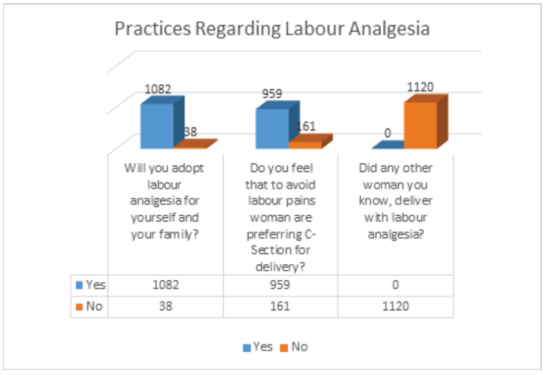

Fig. 3 Practices regarding LA

DISCUSSION

Labor pain is one of the most severe, excruciating and intolerable pain, which a parturient undergo during the process of childbirth. When respondents were asked regarding intensity of Labour pain, 52% said it is severe and 43.5% told it is intolerable. Similar findings were observed by Melzack R et al. in study of 141 patients in Pregnant Ladies in obstetric unit of the Montreal General Hospital Canada in 1981 who had undergone labor pain. Amongst them 25% of the primiparas and 9% of the multiparas reported their pain as horrible or excruciating, and 23% of the primiparas and 11% of the multiparas had severe pain (3)

Similarly KAP study by Shidhaye et al. observed that primiparas were fearful of labour pains and worried about delivery complications as compared to multiparas, hence they need to be mainly targeted. (11). Hussain et al also in a cross sectional study conducted in a tertiary care teaching hospital in Chennai India, reported that 80% of the women attending antenatal clinic felt that the labour pain is the worst possible pain and nothing can be done about it.(12)

When study population was asked about methods for pain relief, 33.8% said caesarean section was the way to avoid labour pain, 65 (5.8%) said labor analgesia and rest 677 (60.4%) were not aware of any method.

In developed nations pharmacologic means of pain relief are the preferred method. There are many methods to relieve labour pain. The pharmacological methods known are parenteral opioids, epidural analgesia, paracervical block and Nitrous oxide. (13, 14)

Amongst pharmacological methods, practice of epidural analgesia (EA) is higher in high-income countries and is mainstay of labor an analgesia in 50%–90% of obstetric units. But in low-income countries practice of EA is scarce and varies between 1.3% and 12%, although its an effective and well established mode of relief of pain with minimal neonatal maternal and fetal complications. (15,16)

In developing countries most of the time no LA or non-pharmacologic method is utilized and these methods depend on individual and institutional factors and background characteristics of health professional. (9,17).

Various non-pharmacological methods which are practiced for LA are physical comforting such as touching, massaging, bathing, grooming, applying warmth or cold, breathing exercises, transcutaneous electrical nerve stimulation, sterile water injections, acupressure, acupuncture, hydrotherapy, immersion bath, audioanalgesia, aromatherapy, hypnosis and relaxation.(18-20)

In our Study when respondents were asked about whether they have heard about LA, 5.8% said yes but majority around 94.2 % said they are not aware. Hence, in our study we found there was no association of awareness level to socioeconomic condition, religion, education or parity. Similar study results of ignorance of LA was observed by Deogaonkar SG et al. in a KAP study carried out in 250 pregnant patients attending ANC OPD in a Rural Medical College in rural India. Sidhaye et al regarding awareness and attitude in pregnant women towards labour analgesia found that irrespective of age, education level, socioeconomic status reported 98.48% pregnant women were not having any information about labour analgesia. Hug et al did a survey of pregnant women of mixed parity from Calcutta, reported only 38.9% awareness among study population. Similarly in a Nigerian population, Olayemi O et al. in Ibadan and Maiduguri, and Audu B et al also did not find any positive correlation. (1, 9, 21, 22)

Contrary to this Oladokun et al surveyed in the antenatal clinic of University College Hospital, Ibadan, Nigeria to assess women's views about epidural analgesia and observed that 80.5% had knowledge of labour pain and 19.5% amongst them were aware of epidural analgesia. (10)

In contrast to our study Okeke CI et al also reported significant association between educational status and knowledge of obstetric analgesia, in study carried in Lagos. (23)

When asked regarding source of awareness of LA 20.9% said TV, 10.9% from friends, 5.1% from doctors and 2.7% from radio. When asked specifically about LA, more than 60.4 % had not even heard of LA. Those who were little bit aware about pain relief methods 33.8% were under impression that delivery by caesarean section is LA and only 5.8% participants were aware that pain free vaginal delivery is LA.

As brought out by various similar studies, knowledge about LA was obtained from friends, relatives, media and literature rather than from obstetricians. It shows antenatal education of women regarding LA by health providers is poor in our study which is similar to the inference obtained in other studies done in pregnant women. (24-27)

Obstetricians and midwives are the health care personnel that the pregnant women comes in close contact frequently and it has shown the benefit of integrating the services of anaesthesiologists, obstetricians and midwives both in educating the antenatal women and in providing LA. (22, 27, 28)

Regarding awareness of which physician administers LA, more than 53% were not aware which doctor provides LA, only 15.7% were aware that the Anaesthesiologist provides LA. In similar study by Pattee et al in Ontario showed that information about epidural analgesia was mainly from anaesthetists and antenatal classes and the internet accounted only 1%. (29)

Awareness of complications when they were asked whether LA increases time of labor 42.8% said yes, 7.4% said no and 49.8% said they don't know and it increases the chance of caesarean section 17.8% said yes 8.6% said no and 73.7% said they don't know.

Similar studies feared about increased interventions in labor, effect on the unborn baby and feared headache. (29,30)

It may be associated with some complications such as severe hypotension, prolonged second stage of labor, and increased risk of operative deliveries, urinary retention, post dural puncture headache, epidural abscess, or meningitis. (31-33)

There are numerous myths and controversies that hover around in the minds of parturients regarding LA. Interestingly around 43% feel it is normal to have labor pain for normal delivery of child, but 33% feel it should be avoided and 24% were not aware about it. These findings of attitude were supported by KAP studies conducted in population of developing countries like India, Nigeria, Middle East and Pakistan. (34)

When asked do you feel that caesarean section is better way for pain relief, 86% felt that a parturient prefers caesarean section to avoid pain during labour. When they were made aware, it was heartening that around 97% of participants were ready to opt for LA. This is supported by KAP study by Shrikrishna DG et al. in Indian rural population after awareness, 90.4% were willing for LA.(1)

In various studies like ours, participants refused to opt for LA due to reasons like affordability, familial tradition, beliefs, their obstetricians choice, increased expenses, well-being of foetus, fear of caesarean section and lesser bonding with child etc. (1,12)

CONCLUSION

It is important to sensitize women, about pain relief in labour as women in developing and even developed countries are generally unaware and their ability to seek and gain information is limited for various reasons and compulsions.

In a country like India with limited resources and patient overload, there is an unavoidable compromise in providing epidural LA to all patients, and, in such situations, we should consider non-pharmacological intervention for pain relief. In our population once people were made aware they were willing to opt for LA.

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