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Research Article

Awareness and desirability of antenatal attendees about analgesia during childbirth in a university teaching hospital in southern Nigeria

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ABSTRACT

Background: Labour pain is among the most severe pains humans experience and when unrelieved, is associated with adverse maternal and foetal effects.
Methods: Structured questionnaires were administered to 268 consenting parous women in the antenatal clinic of the University of Uyo Teaching Hospital, Nigeria over a 4-months period.
Results: The majority of the respondents were between 25-34 years (84.0%), and were well educated (64.4%). About half (59.7%) of the respondents did not know that pain free labour was possible, while only 6.7% of the women had pain relief in their last delivery. The majority (81.4%) desired pain relief during their next delivery. Books (35.1%) and friends/relatives (32.4%) were the most common sources of information on pain relief in labour. Perception of pain was positively associated with the educational level of the women (P=0.013).There was also a significant association between ethnicity and desirability for labour pain relief.
Conclusions: The practice of obstetric analgesia in labour is far from optimal in our center. The need to create awareness about pain relief in labour and its importance specifically among our antenatal clients cannot be overemphasized.

Keywords: Labour analgesia, Antenatal attendees, Uyo

INTRODUCTION

Labour pain is a naturally painful phenomenon that women have endured from the beginning of human existence. It is among the most severe pains human's experience and compares in its intensity to severe cancer pain or pain from the amputation of a digit.[1]

The perception of labour pain by parturients is influenced by many factors.[2,3] These include parity, maternal age, culture, social status, ethnicity, maternal and fetal weight, foetal position, educational attainment and the presence of a companion in labour.[3,4]

Besides the compassionate concerns, labour pain may result in physiological changes with maternal and foetal consequences.[1] Pain may result in maternal hyperventilation and respiratory alkalosis leading to uteroplacental and foetoplacental vasoconstriction, a leftward shift in the oxyhaemoglobin dissociation curve and foetal hypoxemia.[5,6] Cortisol and catecholamine release induce lipolysis and hyperglycaemia with resultant maternal metabolic acidosis and ultimately foetal metabolic acidosis.[5,6] In addition, severe and unrelieved labour pain has been associated with poor maternal satisfaction, postpartum depression, and post-traumatic stress disorder.[1]

The relief of labour pain is therefore of benefit to both mother and foetus as it mitigates these untoward effects of labour, ensures a satisfying labour experience and a healthy reproductive outcome.[2]

Pain relief management during labour has undergone various advancements since 1847 when Simpson discovered that chloroform could help relieve labour pains.[1] Currently, many options exists from; non-pharmacological ones like breathing, posture and relaxation techniques, hypnosis, acupuncture and trans electric nerve stimulation (TENS) to pharmacological ones like opiods (pentazocine, pethidine, fentanyl, remifentanyl), inhalational agents (entonox) and regional methods (epidural).[7]

Unlike in developed countries where the practice of obstetric analgesia is well established and women avail themselves of these different options, in developing countries, like Nigeria available evidence shows that this aspect of labour management is far from optimum.[8,9] In addition, many Nigerian health care institutions lack protocols for the management of labour pains despite overwhelming evidence of its usefulness.[1]

To the best of the knowledge of the authors, there has been no previous study in our environment evaluating awareness of the use of analgesia in labour and its desirability among parturient. Hence, the aim of this study is to evaluate the awareness and desirability of labour analgesia among pregnant women in our hospital. It is expected that the outcome of this study will provide useful guidelines in optimizing the management of labour pains among parturients in our center and also provide satisfactory analgesic services in labour to our obstetric population.

METHODS

This cross-sectional study was carried out in the antenatal clinic of the obstetrics and gynecology department of the University of Uyo teaching hospital, a tertiary hospital located in Uyo, the capital of Akwa Ibom State in the South-South geopolitical region of Nigeria. The hospital is a major referral centre for both private and Government owned hospitals in Uyo and its environs.

Patient selection and data collection was between 1st May 2014 and 31st August 2014, two hundred and sixty-eight consenting parous women who were attending the antenatal clinic of the University of Uyo teaching hospital, Uyo and who had delivered at least once vaginally were consecutively recruited into the study after explanation of the study objectives and assurance of confidentiality of information. Trained resident doctors administered structured questionnaires that contained questions on socio-demographic characteristics of the respondents, and awareness and desirability of analgesia use during labour in the antenatal clinic. Health staff (Doctors, nurses, pharmacists, and medical laboratory scientists), nulliparous women, parous women had been delivered only by elective caesarean section and those who did not consent were excluded from the study. The study was approved by the ethical review committee of the hospital.

The sample size was calculated using the kish Leslie formula for cross-sectional studies 10, based on the following assumptions, 95% confidence level, awareness of labour analgesia in a previous study and a 5% margin of error.

$n = \frac{z^2 p9}{d^2}$ Where n is the desired sample size.

Z is the standard normal deviate set at 1.96, which corresponds to the 95% confidence interval. P is the proportion of women aware of labour analgesia from previous studies 11, which is 15%, Q is 1 minus p and d is the degree of accuracy desired set at 0.05.

$$n = \frac{z^2 p9}{d^2} = \frac{1.962\ x\ 0.15\ (1 - 0.15)}{0.05^2} = \frac{0.489804}{0.0025} = 196$$

Data was analyzed using the statistical package for social sciences (SPSS) version 20. Results were presented using tables as frequencies and percentages, chi-square, kruskal-wallis test and the Spearman's rank-order correlation coefficient. The level of significance was set at $P< 0.05$.

RESULTS

Socio-demographic characteristics of the respondents

The ages of the client ranged between 21-43 years (mean 29.86±3.73 years), while their parity ranged from 0-5 (mean 1.40±0.98)). Majority were between 25-34 years (84.0%). Most of the women 171 (63.8%) were of Ibibio extraction and lived in an urban area 195 (72.8%). Majority of the respondents 173 (64.6%) were well educated and were either civil servants (38.4%) or traders (38.1) (Table 1).

Conception of labour pain

The severity of labour pain was graded either as moderate 94 (39.0%), mild 36 (14.9%), severe 92 (38.17%), or excruciating by 20 (8.3%) respondents respectively.

Awareness of pain relief in labour

One hundred and sixty women (59.7%) did not believe it was possible to have pain free labour, while 37.3% were of the opinion that pain free labour was possible (Table 2).

Majority 194 (72.4%) did not have any information about pain relief in labour while only 74 (27.8%) had such information. Concerning their sources of information

about pain relief in labour, most, obtained them from books (35.1%) and friends/relatives (32.4%). Other sources of information were the antenatal clinic 18 (24.3%), the internet 18 (24.3%), church 6 (8.1%), radio/television 5 (6.8%), and health staff (doctor, pharmacist) 5 (6.8%).

Table 1: Sociodemographic characteristics of the clients.

Variable		Frequency (n)	Percentage (%)
Age group	20-24	17	6.3
	25-29	105	39.2
	30-34	120	44.8
	35-39	22	8.2
	40-44	4	1.5
Ethnic group			
	Ibibio	173	64.6
	Annang	48	18.2
	Oron	4	1.5
	Others	43	16.3
Residence			
	Rural	21	7.9
	Semi Urban	51	19.1
	Urban	195	73
Educational Level			
	Primary	12	4.5
	Secondary	83	31.0
	Tertiary	173	64.6
Occupation			
	Civil servant	103	38.4
	Clergy	1	0.4
	House wife	60	22.4
	Tailoring	2	0.7
	Trading	102	38.1

On their knowledge of different methods of pain relief in labour, 5 (6.8%) knew acupuncture , hypnosis 3 (4.1%), diversional therapy 7 (9.5%), psychotherapy 14 (18.9%), inhalational (entonox) 7 (9.5%), non-steroidal anti-inflammatory drugs (NSAIDS), 29 (39.2%), TENS 5 (6.8%), opioids with adjuvants 8 (10.8%), regional anaesthesia 11 (14.9%), systemic opioids e.g pethidine 16 (21.6%) and others 4 (5.4%).

Table 2: Awareness of pain relief in labour.

	Frequency (N)	Percentage (%)
Yes	100	38.0 %
No	160	60.8 %
Don't know	3	1.2 %
Total	**263**	**100 %**

Only 18 (6.7%) of the women had pain relief in their last delivery and among them 8 (44.4%) found it satisfactory. The methods used for them were injections 5 (27.8%) and psychotherapy 3 (16.7%). The remaining 10 (55.6%) did not know the method they were given.

Desirability of analgesia in labour

Table 3: Reasons for not desiring analgesia in labour.

	Frequency (N)	Percentage (%)
Wants natural labour	32	68.1
Fear of side effects	7	14.9
May slow labour	2	4.3
Depends on pain severity	3	6.4
Wants elective C section	3	6.4
Total	**47**	**100**

The major reasons given by those women who did not desire pain relief were that they would want natural labour devoid of interference 32 (68.1%), fear of side effects on the baby or themselves 7 (14.9%) and fear that it may slow down labour 2 (4.3%) (Table 3).

Most of those who desired pain relief in labour 196 (73.7%) were willing to pay extra for pain relief, while 50 (18.7%) would not want to pay any additional money for pain relief in labour. Some of the reasons given for not wanting to pay more for pain relief in this group included financial constraints 6 (17.1%), 2 (5.7%) felt pain relief should be free, and no extra cost should be added to the normal hospital bill 2 (5.7%). The remaining 25 (71.4%) clients did not give any reasons.

Spearman's rho analysis indicated a statistically significant negative association between perception of pain and age group of the women (P = 0.014), whereas the age group increased, perception of pain decreased.

Further analysis did not show any association between perception of labour pain with ethnic group, or residence based on the kruskal-wallis test. However, perception of labour pain was positively associated with the educational level of the women (P = 0.013) with women more likely to perceive labour pain as moderate to excruciating as their level of education increased.

Awareness about pain relief had no statistically significant association with age group, ethnic group, and place of residence, educational level or occupation. On the desirability for pain relief in labour, there was no statistically significant association with age group, residence, educational level, or occupation. However, there was a significant association between desirability for labour pain relief and the ethnic group of the women with the Ibibio's more likely to desire pain relief than other ethnic groups.

DISCUSSION

The knowledge of pain relief in labour in many parts in Nigeria is reported to be still low.[10] In our study, just about a third of the patients were aware of analgesia in labour. This level of awareness about pain relief in labour is higher than those from previous studies conducted in other parts of Africa and Asia but much lower than those reported from developed countries were rates as high as 80% have been documented.[7,9,11-14] In a study conducted by Shidhaye et al in Loni, India, out of two hundred women surveyed, not one knew that delivery was possible without suffering labour pains. In a similar study by Kapadia et al in Gujarat, India, 95.0% of the women interviewed were totally unaware of analgesia in labour.[12,15] The reasons for the low level of awareness in our study are not clear. However, unlike other Nigerian studies awareness of pain relief in labour in this study did not have significant statistical association with maternal age, ethnicity, educational level or occupational status.[6-8]

In this study, majority of the women interviewed did not have any information about pain relief in labour despite current advances in this field and the important role this plays in contemporary obstetric practice. Most of the women who were aware of pain relief in labour got their information from books and friends/ relatives. This is similar to finding from other studies and may explain the low utilization of labour analgesia in this study. Obtaining information from friends/ relatives may lead to misinformation, which may discourage the women from making use of labour analgesia despite what they might have read in books.[9,11]

Systemic opioids, NSAIDs, and psychotherapy were the most commonly known methods of pain relief to the respondents notwithstanding the availability of more effective methods of pain relief. Only 14.9% were aware that regional analgesia and particularly epidural analgesia provides the most effective form of pain relief in labour.[1] In addition to pain relief, epidural analgesia reduces maternal plasma concentrations of catecholamine's, improves utero-placental perfusion, blunts the hyperventilation hypoventilation cycle associated with painful contractions and is indicated as analgesia of first choice in cases of cardiac and respiratory diseases were the Valsalva maneuver associated with pushing may be detrimental.[1]

The proportion of women who had pain relief in their last delivery was quite small when compared to what obtains in other studies and about half of them did not have satisfactory pain relief.[8] This clearly reflects the low level of practice of obstetric analgesia our environment. Though most did not know the method they were given, injections which have been documented as the most commonly administered method of pain relief in Nigeria was the method most commonly documented by the women.[7,8] Available evidence from many Nigerian communities has shown that health institutions offer pregnant women opioid analgesia sporadically during childbirth with no clear protocol.[7] Unfortunately available evidence also suggests that the effect of parenteral opiods is more of sedation rather than analgesic and they are associated with problems of maternal drowsiness, nausea and vomiting, as well as foetal respiratory depression which remains a major concern.[1]

The desirability of analgesia in labour in this study is high and similar to reports from other studies.[7,8,10] Since this study consisted of only parous women who had undergone vaginal delivery, with just a small proportion having received some form of pain relief, they must have appreciated the severity of labour pains and may not want to experience such again. In addition, most of the women were well educated and this study confirmed a positive association between maternal educational level and pain perception. This highlights the unmet need for analgesia in labour among women in our environment and suggests that if aware of their availability, women would prefer to use them.

Despite the high desirability, some of the women did not want pain relief in labour. The most common reason given was that labour was a natural process and should be devoid of interference. This reflects the traditional nature

of our society and the influence culture has on the events in labour. Women are expected to be stoic and bear the pains of labour just as their ancestors did and many believe that women should still labour according to the biblical injunction that "In pain shalt thou bring forth thin offspring's". This finding is also in keeping with other studies.[1,8,16]

The limitations of this study is a facility based study based in the urban area and may not be reflective of what obtains in the general population the general population.

CONCLUSIONS

The level of awareness of obstetric analgesia among our women is poor and its practice is far from optimal. The vast majority of the women however desire pain relief during labour. The need to create awareness about the benefits of analgesia in labour particularly among our antenatal clients cannot be overemphasized.

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