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Research Article

Knowledge, Attitude and use of Obstetric Analgesia in Labor Pain Management among Professionals in Dessie Referral Hospital, North Ethiopia Hospital Based Cross Sectional Study

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Abstract

Back ground: Labor pain is the most severe form of pain in women life. Delivery of the infant into the arms of pain-free mother is the most exciting and rewarding moment in maternal care services.

Objective: To assess Knowledge, Attitude and Utilization of Obstetric Analgesia in Labor Pain Management among professionals in Dessie Referral Hospital, Northeast Ethiopia

Method: Institution based descriptive cross sectional study was conducted in Dessie referral hospital from May 1-15/2016. There were 102 obstetric care givers in the hospital and all of them were included in the study. Descriptive analysis was done by using tables, frequency, mean, standard deviation and percentage.

Result: Only28.6% of respondents used obstetric analgesia. 37% and28.4% of respondents had adequate knowledge and positive attitude respectively.75.9% say analgesia should be given for every laboring mother. 59.4% of respondents believe that pharmacologic obstetric analgesia had bad effect on labor progress and outcome. The worst effects mentioned by respondents were delay progress of labor (44.4%), Fetal Distress (34%) and increase Cesarean Delivery (30%).

Conclusion and Recommendation: Knowledge and utilization of obstetric analgesia were very low. Only quarter of professionals had positive attitude. Providers need to update themselves and be familiar with obstetric analgesia. The utilization and associated factors of obstetric analgesia need to be investigated.

Keywords: Attitude; Ethiopia; Knowledge; Obstetric Analgesia; Utilization

Background Information

Labor pain is a physiological phenomenon associated with ischemia of uterus; during contraction, dilation of cervix, stretching of vagina, perineum and pelvic structures [1,2]. Labor pain relief with pharmacologic analgesia is full of myths and controversies; the concept of painless delivery was existed in the early 19th and mid-20th century [3]. Perception of pain, including pain of uterine contraction, is a complex process that involves interaction of both central and peripheral mechanisms. Pain perception involves sensory, emotional, behavioral and environmental factors. The control of labor pain and prevention of suffering are major concerns of clinicians and their clients [4].

The American College of Obstetricians and Gynecologists (ACOG) states that "there are no other circumstances; considered as severe as labor pain. In literatures laboring women described the pain as very severe and intolerable [5] even Childbirth is a traumatic event for most mothers and can cause posttraumatic stress disorder [6] and acute postpartum pain [7]. ACOG and American College of Nurse-Midwives' recommends pain relief [5] and say "women should have access to variety of measures to assist them in labor [8].

Understanding of labor pain provides the basis for a woman-centered approach to labor pain management that includes pharmacologic and non-pharmacologic intervention strategies. Labor pain reliefs are an important aspect of women's health that has historically been neglected. Much of the general literature investigating pain perception by patients and attendant staff indicates that nurses often under- or over-estimate pain levels and consistently fails to administer adequate analgesia [4].

Many pharmacologic and none pharmacologic treatments have been used to alleviate labor pain including systemic Opioids, epidural analgesia, combined spinal-epidural analgesia, trans cutaneous electrical nerve stimulation, massage and breathing technique. When women are offered analgesia, they report greater birth satisfaction [9].Women who had continuous intra partum support were more likely to have shorter labor, spontaneous vaginal birth, birth satisfaction and less likely to have intra partum pharmacologic analgesia [10]. In developed world number of women receiving pharmacologic analgesia, in 2014, more than 70% of women received pain relief [11] and in 27 states vital statistics report, the percentage of women receiving epidural/spinal anesthesia ranges from 22-78% [12]. In developing countries including Ethiopia use of obstetric analgesia for labor pain relieve is not a common practice. This may be due to misconceptions including result of long-term backache, harm to baby, breast feeding problem, increased caesarean section, slow labor progress and permanent medical problems for the mother and newborn [13].

To date there is no published data on the prevalence, determinants and severity of labor pain in Ethiopia. Therefore the current study was carried with the purpose of exploring knowledge, attitude and utilization of obstetric analgesia in labor pain management among professionals in Dessie referral hospital. The result of this study may help policy makers, stakeholders and health professionals to design appropriate interventions in giving safe and comfortable delivery service as well as baseline for further research.

Methods

Institution based descriptive cross sectional study was conducted in Dessie referral hospital from May 1-15, /2016. Dessie is located 401kms to the North of Addis Ababa and 480 km from the capital city of Amhara Region (Bahir Dar). Dessie Town has one Referral Hospital and 5 Health Centers. The Gynecology and obstetrics department has 5 gynecologists, 32 midwives and 12 nurses. Antenatal care also has a total of 15 professionals giving service. The department also has 33 bed & 5 Delivery koches with its own separated Operation room.

The study participants were all skilled health professionals giving maternal care service in antenatal care, Delivery Room and gynecology ward. Since there were small numbers of source population in the study area all obstetric care givers available during the study period were included in the study. The variables studied were; socio-demographic variables, knowledge, attitude and utilization.

Data Collection Method

The research was conducted in Dessie referral hospital from May 1-15/2016. Structured pre-tested self-administered questionnaire was prepared by adapting from different studies considering the local situation of the study area and purpose of the study. The questionnaire had three essential components related to obstetric analgesia utilization in labor pain management including providers' socio-demographic characteristics, knowledge, attitude and utilization. The attitude of respondents was categorized into positive and negative, their knowledge also divided into adequate and inadequate. Adequate knowledge, positive attitude and utilization were determined by using the mean value of correct answers. Professionals who answer "YES" more than the mean value was considered as having adequate knowledge, positive attitude and using obstetric analgesia. The questionnaire was pretested on 6(5%of sample) individual from Woldiya Referral Hospital, Ethiopia to check the consistency and necessary adjustment was done prior to the actual data collection. Five BSc (Bachelor of Science) female midwife graduating class students were employed as data collectors and trained for one day regarding the technique of data collection. Self-administered structured questionnaire was delivered to each obstetric care givers in the antenatal care room, delivery room and gynecology ward during the data collection time and requested to fill the data honestly and sincerely.

Analysis

Data clean up and cross-checking was done before analysis. Data were checked, coded and entered to EPI Info version 3.5.3 then it was exported to Statistical Package for Social Sciences (SPSS) version 20 for analysis. Descriptive statistics like percentage, frequency, mean, standard deviation and tables were used for the presentation of demographic, knowledge and attitude of obstetric analgesia.

Ethical Consideration

The data collection was carried out after getting approval from the Ethical review committee of Wollo University. In addition official letter of cooperation was submitted to Dessie referral hospital. Informed verbal consent was obtained from each study participant prior to starting the data collection process. Any obstetric care givers who were not willing to participate in the study were not enforced to involve in the project and had full right to refuse or withdraw from participation. They were also informed that all data obtained from them would be kept confidential by assigning codes instead of using name.

Result

Socio-Demographic Characteristics

A total of 102 obstetric care givers were included in the study,

making a response rate of 100%. The mean age of the respondents was 28.4(± SD = 4.6) years. Two third 68(66.5%) of professionals were in the age group of 20-29 years. About 67(64.2%) of the respondents were males and eighty professionals (64%) were orthodox Christians followed by 32% of Muslims. Out of the total respondents 53% were midwives in profession. Nearly two third (68%) of respondents had experience of less than 5 years. About 29.4% of respondents had highest qualification of BSc degree and 37.3% had diploma (Table 1).

Characteristics	Frequency (n)	Percent (%)
Age(in years)		
20-29	68	66.5
30-39	25	24
>=40	9	9.5
Sex		
Male	66	64.2
Female	34	35.8
Religion		
Orthodox	65	64
Muslim	33	32
Others	4	4
Profession		
Midwife	54	53
Medical Doctor	20	19.3
Nurse	15	15
Health Officer	12	11.3
Anesthiologist	2	6.4
Highest qualification		
BSc	30	29.4
Diploma	38	37.3
Masters	12	11.8
General practitioner	3	3
Intern	10	9.8
Resident	5	4.9
Gynecologist	2	2
Years of experience		
<=5	69	68
9-Jun	19	18.9
>=10	14	15.1

Table 1: Distribution of professionals by their socio-demographic characteristic in Dessie referral Hospital Referral hospitals, Northwest Ethiopia, May 1-15, 2016 (n = 102).

Knowledge

Out of the total respondents about64(63%) of professionals had inadequate knowledge about obstetrics analgesia. 12.4% and 9.4% of respondents know nonpharmacologic and pharmacologic methods respectively. The most known pharmacologic methods were IM/Iv (63.3%), regional (62.1%), NSAIDS (58%) and systemic opioids (44.9%). (Table 2)

Characteristics	Frequency (n)	Percent (%)
Regional		
Yes	63	62.1
No	39	37.9
Systemic opioids		
Yes	46	44.9
No	56	55.1
Inhalational		
Yes	34	33.1
No	68	66.9
IM/Iv		
Yes	65	63.3
No	37	36.7
Cervical		
Yes	24	23.7
No	78	76.3
Opioid with adjuvant		
Yes	28	27.8
No	74	72.2
NSAIDS		
Yes	58	58
No	44	42

Table 2: Distribution of professionals showing their pharmacologic obstetric analgesia knowledge in Dessie Referral Hospitals, North Ethiopia, May 1-15, 2016 (n= 102).

On the other hand; the common known non-pharmacologic obstetric analgesia methods were psychotherapy (74.8%), massage (70.2%), breathing technique (54.2%), showing how to bear down (50.2%) and labor exercise (42.8%) (Table 3).

Characteristics	Frequency (n)	Percent (%
Acuputure		
Yes	17	17.1
No	85	82.9
Divertional therapy		

Yes	19	18.8
No	83	81.2
Psychotherapy		
Yes	76	74.8
No	26	25.2
Massage		
Yes	72	70.2
No	30	29.8
Labor exercise		
Yes	44	42.8
No	58	57.2
Breathing technique		
Yes	55	54.2
No	47	45.8
Hypnosis		
Yes	13	13.1
No	89	86.9
Allow companion		
Yes	30	29.1
No	124	70.9
Show how bear down		
Yes	52	50.2
No	50	49.8
Hot compress		
Yes	25	24
No	77	76

Table 3: Distribution of professionals showing their non-pharmacologic obstetric analgesia knowledge in Dessie Referral Hospitals, North Ethiopia, May1-15, 2016 (n=102).

Attitude

Regarding the attitude of professionals out of the total respondents (71.6%) professionals had Negative attitude towards utilization of obstetrics analgesia in labour pain management. 75.9% of respondents say analgesia should be given to laboring mothers and out of them 72% support analgesia for every mothers and 28% say analgesia should be given when labor pain becomes severe.

Most professionals (45.3%) prefer pharmacologic methods as better pain relief. 59.4% of respondents believe that pharmacologic obstetrics analgesia had bad effect on labor progress and outcome. The worst effects mentioned by respondents were delay progress of labor (44.4%), Fetal Distress (34 %) and increase Cesarean Delivery (30 %) Figure 1.

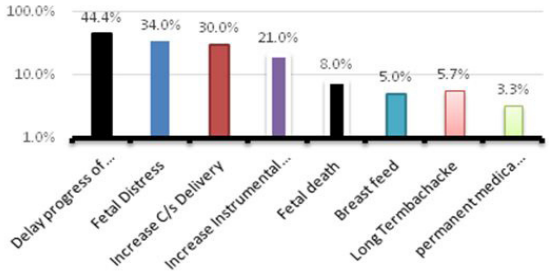

Figure 1: Respondents' response to the question "effect of pharmacologic pain relief methods during labor and childbirth?" in Dessie Referral Hospital, North Ethiopia, May 1-15, 2016(n=102).

Utilization of obstetrics analgesia

The overall utilization of obstetrics analgesia in labor pain management in Dessie referral hospital was 28.6%. All professionals used non-pharmacologic methods and while the utilization of pharmacologic obstetric analgesia methods were found to be zero. Psychotherapy (70.2%) was the most used method followed by breathing technique (52%) and massage (51.4%). Figure 2

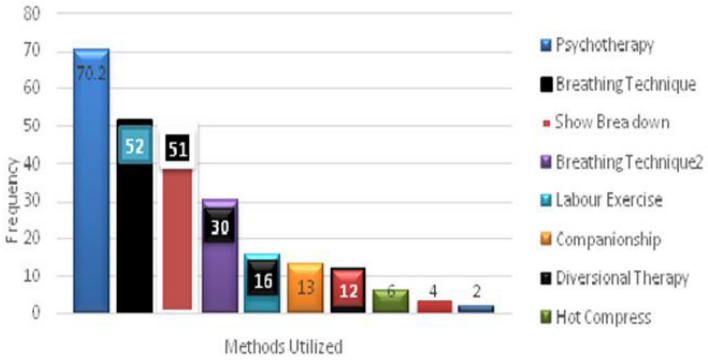

Figure 2: utilization of obstetric analgesia in labor pain management in Dessie referral hospital, North Ethiopia, May 1-15, 2016 (n= 102).

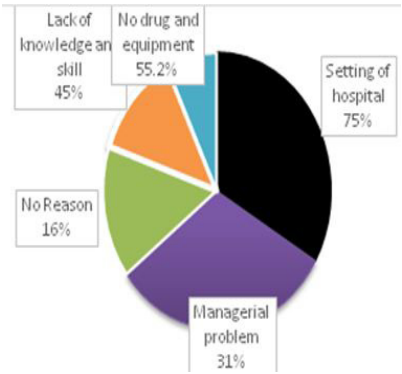

Figure 3: Reasons given for not administering obstetric analgesia for labor pain management in Dessie Referral Hospital, North Ethiopia, May 1-15, 2016 (n= 102).

Discussion

The study revealed, the overall utilization of obstetric analgesia in labor pain management in Dessie referral hospital was 28.6%. This proportion only showed non-pharmacologic obstetric analgesia methods. The finding is lower than utilization of non-pharmacologic obstetric analgesia methods in Bangladesh of psychotherapy, labor exercise and allowing companionship in labor pain relief (40%, 84.5% and 77.3% respectively) which were 21% and 19.3% in this study [14]. It is also lower than the non-pharmacologic obstetric analgesia utilization in Nigeria (56.8%) [15].

The utilization of pharmacologic analgesia methods was zero. Even though the utilization was zero, it is a common practice in many countries of the world. The result is not comparable with others like epidural analgesia use in Franc, Sweden, Bangladesh, Colombia and South Africa (75%, 71%, 58.5%, 31.5% and 21%) respectively. It is also not comparable with sterile water use in Australia (42.5%), America (26%) and butyl bromide (58.6%) and but ban tablet (60.9%) use in Bangladesh [16]. In Nigeria 49% of obstetricians offered obstetric analgesia [17] and 27% of mothers in Canada received the commonest (92.6%) IM Pentazocine Hydrochloride pain relief [18]. In other study about (22.1% - 33.5%) and (48%) in Nigeria, (18%) in Kenya and 55% in Durban, South Africa received pharmacologic obstetric analgesia [19,20]. In these study pharmacologic methods particularly Pethidine was mentioned by professionals being used for only when they want to rule out false labor.

The lower obstetric analgesia utilization for labor pain management in this study might be due to inadequate knowledge of professionals about labor pain management. It may be also due to negative attitude, lack of attention for labor pain and setting of the hospital. The other possible explanation for this might be the absence of strategies and policies prepared by Ethiopian ministry of health regarding obstetric analgesia utilization in labor pain management. In the present study the reason for not using pain relief in labor pain management were; the setting of the hospitals, lack of skilled professionals, unavailability of analgesic materials, unavailability of drugs, misconceptions regarding labor pain. The finding is consistent with a study done in Nigeria and Lesotho [15-21]. This study has found that 37% of professionals had adequate knowledge while 26 % professionals had positive attitude. The study is in line with a study conducted in Amhara region referral hospitals in Ethiopia [22].The similarity may be because of similarity in study setting and study design. However this study does have some limitations. Though variables like attitude, cultural belief and utilization can best assessed qualitatively; they were studied quantitatively.

Conclusion

The study revealed that the knowledge of professionals and utilization of obstetric analgesia were very low. Most professionals had negative attitude towards obstetric analgesia. The worst effects of pharmacologic analgesia mentioned by respondents were delay progress of labor, Fetal Distress and increase Cesarean Delivery. Ministry of Health and the hospital mangers are responsible to establish a health program which focuses on giving safe and comfortable delivery services. Obstetric care givers need to update their knowledge and be familiar with obstetric analgesia. Finally a qualitative study needs to be done to investigate need of mothers for labor pain relief and factors associated with utilization of obstetric analgesia to supplement the findings from this study.

List of Abbreviations and Acronym

ACOG	:	American College of Obstetricians and Gynecologists
EA	:	Epidural Anesthesia
SD	:	Standard Deviation
SPSS	:	Statistical Package for Social Sciences

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