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Research Article

Midwives' Attitudes to Painless Delivery: An Observational Study

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ABSTRACT

Background: Parturient health is a priority worldwide. In this regard, the promotion of natural childbirth has always been considered by health policy makers. However, the most important cause of parturient tendency to caesarean section is fear of labour pain and lack of information about surgery complications, leading to inappropriate rate of caesarean. Midwives, attending in prenatal visits and labour, may have a key role in encouraging pregnant patients through labour analgesia. In this study we evaluate midwives' attitude through necessity of labour analgesia and their understanding of neuraxial analgesia for labour pain.

Methods: One hundred and five midwives working educational hospitals, participated in this observational study. All participants were asked to fill questionnaires. Each questionnaire consists of 15 questions, each answer had 1 to 3 points. Total score of 15 to 25 was considered as poor, score 26 to 35 as intermediate and 35 to 45 as good attitude.

Results: Forty-nine percent of midwives had experience with labour analgesia. Forty-one percent participated in relevant educational workshops. About 40% presumed these techniques would result in immobility, while 66% assumed it will lengthen the procedure. 63% believed labour analgesia will increase mother's satisfaction. Overall, 73% of them agreed with regional analgesia. In regards to attitude score, 22% were scored poor, 65% intermediate and 13% good.

Conclusion: Midwives' attitude was estimated low. Participating in workshops improved their attitude, yet the difference was not significant. Attitude of those who participated in labour analgesia was significantly better than others.

Introduction

Uterine contractions and dilation of cervix causes pain during labor and labor pain is one of the most severe pain which human suffers from. Fear of pain during delivery is the most important cause of parturient tendency to cesarean section. Unfortunately rate of surgical delivery is inappropriately high in our country, Iran [1]. Therefore, it seems that improving mother's knowledge about labor analgesia and cesarean's complications while propagating pharmacological and nonpharmacological labor analgesia techniques may be a proper solution [2-3].

In our country the first guideline of labor analgesia was released in 2005 by ministry of health and medical education. Several factors contributed in slow progression of performing these techniques, namely: inadequate knowledge of society, social issues, lack of equipment, poor team communication between healthcare providers involved in labor and their scant understanding, parturient unknowing and lack of prenatal educational courses.

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Midwives have principal role in persuading pregnant women to deliver their baby naturally. They participate in all stages of pregnancy and labor, hence can be of help by encouraging them for natural vaginal delivery (NVD) and utilizing labor analgesia techniques. Misunderstanding of midwives about impact of regional analgesia on labor progression such as prolongation of labor and increasing probability of cesarean section and their wrong beliefs about long term low back pain after neuraxial analgesia may have negative effect on parturient affection for utilizing analgesia facilities. Since labor is associated with severe debilitating pain, management of labor pain is still an important concern which requires concise planning and special attention. The aim of this study is to evaluate attitude, knowledge and experience of midwives about pain management during labor, specifically neuraxial analgesia.

Methods

After being approved by ethical committee of Shahid Beheshti University of Medical Sciences (ethical code IR.SBMU.MSP.REC.1399.405) this cross-sectional observational study was done on 105 midwives working in either obstetric ward, maternity and perinatology office of several Tehran educational hospitals. All volunteers were provided a questionnaire consisting of 15 questions (Table 1). Each answer scored between 1 to 3; score1 was considered as poor attitude, score 2 as intermediate attitude and score 3 as good. Total score was 15 at minimum and 45 at maximum. Score 15 to 25 was considered as poor attitude, 26 to 35 as intermediate attitude and 35 to 45 as good attitude. Data collection was done by a person other than authors. In order to evaluate influence of educational courses on midwives' attitude, results of those participated in such courses were compared with others. Moreover, impact of experience and previously being involved in labor analgesia was evaluated. Demographic factors, educational and occupational records were reported by dispersion index. Mann-Whitney test was utilized to evaluate relationship between attitude and workshop participation and spearman correlation coefficient in order to evaluate correlation of attitude with occupational and educational background. Data analysis was done by R software version 4.1.2. p value less than 0.05 was considered significant. Data are shown as mean ± SD and number (percentage).

Table 1- Questionnaire

Questions
Has it been more than 60 years since the beginning of regional painless childbirth?
Labour is a physiologic process and doesn't need any analgesia.
Labour analgesia may prolong labour for more than 1 hour.
Labour analgesia increases rate of cesarean section.
Labour analgesia reduces breastfeeding.
Labour analgesia reduces uterine contractions.
Labour analgesia has negative impact on fetus.
Obstetricians have little experience about labour analgesia.
Anesthesiologists have little experience about labour analgesia.
Neuraxial analgesia leads to immobility during labour.
Neuraxial analgesia leads to long-term low back pain.
Labour analgesia is time consuming for staff.
Parturient are less inclined to labour analgesia.
Labour analgesia leads to mother's satisfaction.
Do you agree with labour analgesia?

Results

All 105 midwives were included in this study. They were graduated 10.3 ± 7.8 years before the study and were employed for about 9.7 ± 7.6 years as midwives. (ranged 1 - 30 years). 44 (41.9%) had took part in labor analgesia educational courses and 52 (49.5%) had some experience about painless labor. The overall attitude score was 30 ± 4.97; among them, 23 (21.9%) midwives were categorized as poor attitude, 69 (64.8%) as intermediate attitude and only 14 (13.3%) scored as good attitude (Figure 1).

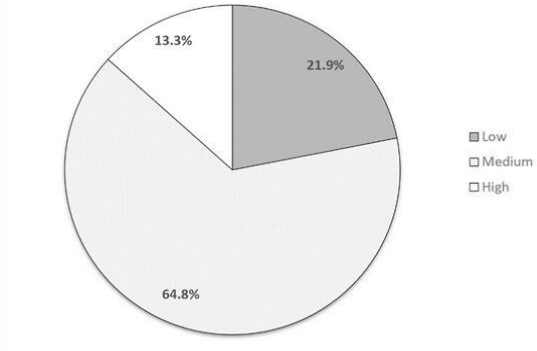

Figure 1- Frequency of midwives' attitude towards painless labour

Spearman correlation coefficient analysis revealed no statistically significant relationship between midwives' attitude and either the time period since their graduation (p value= 0.564 and r=-0.057) or years of their occupational experience (p value= 0.445 and r= -0.075). Midwives' attitude score was higher in those participated in educational workshops (30 + 4.97) compared with those who did not (29.2 + 5.2). However; Mann-Whitney analysis results showed no statistically difference between two group (p value= 0.064).

Midwives who had experience about labor analgesia techniques scored between 31.3 + 4.84, while other scored 28.8 + 4.87. The difference was statistically significant according to Mann-Whitney analysis (p

value= 0.023), suggesting that those who have been involved in painless labor techniques had better attitude toward labor analgesia.

Table 2- Comparison of the effect of participation in the training courses and experience of attending painless labor. Data are express as Mean + SD.

Variable		Attitude score	P value
Participation in training courses	Yes	31.1 ± 4.46	0.064
	No	29.2 ± 5.2	
Attending in labor analgesia	Yes	31.1 ± 4.84	0.023*
	no	28.8 ± 4.87	

*P<0.05. The attitude of midwives who had been involved in painless labor was significantly better than those that did not.

Discussion

Fear of terrible pain is one of the most important causes of parturient denial for NVD. Several approaches exist for management of labor pain including nonpharmacologic techniques, systemic drugs such as opioids and Entonox and neuraxial analgesia (spinal, epidural or combined techniques). Neuraxial analgesia is reported to be the most effective method of reducing pain during labor [4]. Although labor analgesia has already reached a proper position in developed countries, but many developing countries are still far behind [5]. Pregnant women's point of view about NVD and surgical delivery had been assessed in several studies. Enhancing awareness about labor analgesia techniques reduces fear about NVD, leading to less desire for cesarean delivery [6-7]. In a study involving 814 pregnant women in Egypt, 85% were unaware about labor analgesia facilities. 60% of participants asked for surgical delivery; however, after being informed about labor analgesia about half of them decided to proceed with NVD [8].

Women had suffered from labor pain for years because of incorrect beliefs. Until middle of 19th century labor analgesia was a taboo. History of painless labor dates back to 1865, when chloroform was used for this purpose [9]. And first study about using caudal analgesia during labor was published in 1910, more than 110 years ago [10]. In our study midwives known a little about background of labor analgesia. It is possible that informing them about history of regional techniques reduces their resistance to such methods.

According to our results, despite 73% agreement with labor analgesia, only a few had good attitude indicating the necessity of better programming and continuous education. In a study by Dehghanpisheh et al attitude and awareness of obstetricians and midwives about painless labor was evaluated. Twenty-five physician and 93 midwife had participated. About 84% preferred NVD because of mother and fetus safety. Yet, only 34.7% were fully aware of painless labor. Most of them agreed with labor analgesia and their main reason was mother's comfort during labor and less fear about NVD. They concluded, improving health care provider's knowledge about analgesia techniques can influence maternal knowledge and attitude about NVD [11]. Another study conducted in Brazil in 2019 with the aim of evaluating obstetrician's knowledge and attitude through systemic and regional analgesia used during labor. All of them believed that epidural analgesia is effective in reducing labor pain. They also had relatively good information about all other methods [12]. In the current study, 41% of midwives had attended workshops, yet the exact time of participation was not clarified. Those who attended to such educational courses had better attitude, yet it was not statistically significant. Holding workshops regularly, may have an important influence on improvement of knowledge and attitude. Those midwives who had experiences about labor analgesia had significantly better attitude compared to others. Impact of experience was not evaluated in any other study before. In a study conducted by Geranmayeh et al. midwives were instructed about different nonpharmacological methods of labor pain reduction in a one-day workshop. After four months, knowledge, attitude and labor analgesia deployment improved significantly [13]. In a study of Nigeria, level of attitude and function of nurses and midwives were assessed; results were not satisfactory and only half of them had good attitude. Authors of this study suggested regular attendance of nurses and midwives to labor analgesia seminars and workshops [14].

About half of our participants believed that regional analgesia leads to mother's immobility. Moreover 66% claimed that regional analgesia prolongs labor for more than one hour. In the past, higher concentrations of bupivacaine were administered, resulting in muscle relaxation and increased prevalence of cesarean section. Today by addition of short-acting opioids to local anesthetics, lower doses of bupivacaine are utilized, thus motor block is rarely reported and by preserving muscle tone patients can cooperate in second stage of labor [15]. In a meta-analysis by Wang et al. duration of labor was comparable among parturient who received labor analgesia and those who did not [16]. However, there are conflicting results about impact of regional anesthesia on duration of different stages of labor and further studies should evaluate it [4].

In our study, 63% of participants assumed that parturient were more satisfied with epidural analgesia. In a study by Li et al. mother's satisfaction was significantly improved by epidural analgesia [17]. About half of midwives thought regional analgesia has no impact on breastfeeding. Other studies had also concluded so [18]. On the other hand, 19% of our participants believed that regional analgesia leads to backache in mothers while it has been proven that regional analgesia has no impact on prevalence of long term low back pain [4].

22% of midwives believed intervention in labor process is unnecessary. Some healthcare providers across the world believe that labor is a natural and physiologic process, so there is no need to reduce the pain, whilst it is mother's right to have a comfortable and painless experience. An observational study performed in Qena evaluated midwife's standpoint pharmacologic and nonpharmacologic labor analgesia techniques in an area with limited resources. Researchers found out that midwives, despite their relative knowledge, did not prescribe much analgesic because they feared of their adverse reactions. They also didn't welcome nonpharmacologic methods due to their high load of work. Most of them encouraged mothers to tolerate pain since it is physiologic. Authors concluded that midwives are in need for regular educational workshops about pain management during labor [19]. In another study which took place in Ethiopia in 2020, attitude and knowledge of 130 undergraduate midwives were evaluated. Although they were aware of intensity of labor pain, less than half of them thought management of labor pain is necessary. 70% were unfamiliar with labor analgesia techniques. Most of the students assumed that pharmacologic methods have negative influence on labor process and mother and child's safety. At last, it was recommended to hold on some instructional courses about labor analgesia for midwifery students and parturient during perinatology period [20]. Fortunately, the attitude of midwives in our study was better compared to the latter studies.

In the present study 26% of midwives believed regional analgesia increases risk of cesarean section. In the past neuraxial analgesia was believed to result in more instrumental delivery during labor although not increasing rate of cesarean. However, publications after 2005 did not report higher rates of instrumentation during neuraxial analgesia [4, 15]. Recently administering low doses of local anesthetics in combination with short acting opioids, reduced employing forceps and vacuum.

Several studies already revealed that neonate's Apgar score and duration of admission in neonatal intensive care unit is not influenced by type of delivery [4, 16]. 55% of midwives in our study also believed the same. In fact, mothers who did not benefit from pain management strategies may occasionally receive systemic analgesics which increases fetus adverse events and rate of cesarean [21].

In general, according to the previously mentioned studies and our study, it seems that the level of awareness and knowledge about labor analgesia management in midwifes is inadequate.

Limitation

One of the limitations of our study was that the duration of the interval between the participation of the midwives in the training courses and the time of attitude assessment was not obvious because the passage of time may negatively influence their knowledge. Assessment of the latter could perhaps have helped us determine the effect of the time on midwives' attitudes and the necessity of repeating training courses. The sample size of this study was also relatively small, and it is suggested that in the future studies, this investigation should be carried out in a larger population. It is also recommended to perform this survey in different areas of Tehran and other cities.

Conclusion

Perinatology period is a suitable time for providing information to parturient about modes of delivery and labor analgesia techniques. In this respect, midwives are important influencers and play the most dynamic role. They are also involved in all stages of labor and their support is undeniable. It seems that despite strengths, knowledge about labor pain management is unfavorable in our country, thus measures must be taken to ameliorate midwives' attitude. Increasing knowledge and improving midwives' attitude through various types of pharmacologic and nonpharmacologic methods of pain control may have great influence on mother's tendency to natural vaginal delivery and utilizing labor analgesia methods, resulting in less desire for performing cesarean section. Regular attendance in labor pain management workshops may have positive effects on this issue.

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