

Clinical Research on Aromatherapy Combined with Acupoint Massage on Promoting Natural Childbirth of Primipara

Ming Zhang, Yali Kong*

The Affiliated Obstetrics and Gynecology Hospital with Nanjing Medical University / Nanjing Maternity and Child Health Care Hospital, Nanjing 210000, Jiangsu Province, China

*Corresponding author: Yali Kong, XT372032152@163.com

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Abstract: *Objective:* To discuss and analyze the clinical research of aromatherapy combined with acupoint massage on promoting natural childbirth of primipara. *Methods:* A total of 100 primiparas who gave birth in the obstetrics department of our hospital from May 2022 to May 2023 were recruited and divided into the experiment group ($n = 50$) and the reference group ($n = 50$). The experiment group received a nursing that includes aromatherapy and acupoint massage, and the reference group received routine midwifery nursing. Bad mood, pain degree, sleep quality, labor time, and satisfaction were compared between the two groups. *Results:* Before nursing, there was no statistically significant difference in all the observation indicators between the two groups ($P > 0.05$). After nursing, the anxiety, depression, and other negative emotions, pain degrees, sleep quality, and satisfaction degree of the experiment group were significantly better than those in the reference group ($P < 0.05$). The duration of labor in the experiment group was shorter than that of the reference group ($P < 0.05$). *Conclusion:* Aromatherapy combined with acupoint massage can promote the natural delivery of primipara, and it is worthy of wide application and promotion.

Keywords: Aromatherapy; Acupoint massage; Primipara natural childbirth

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1. Introduction

Childbirth is a physiological process. Primipara refers to women who have given birth for the first time. The progress of labor in primipara is relatively slow. Primiparas are prone to some adverse psychological states when facing childbirth, which in turn affect the labor process and delivery method^[1]. At present, it is considered that cesarean section is the best way of delivery. In recent years, the rate of cesarean section has been increasing frequently. After a cesarean section, there is a certain chance of having postoperative complications such as postpartum hemorrhage, infection, etc. The postoperative recovery period is long, which will cause certain damage to the health of the parturient^[2]. A corresponding system has been formulated for cesarean section, and cesarean section is not performed unless necessary. In order to alleviate the pain and psychological barrier of the parturient, certain improvements have been made in nursing^[3,4]. The application of routine nursing in primipara mainly focuses on observing the labor process and providing treatment measures and has little

effect on the promotion of natural childbirth and the intervention of maternal psychology^[5,6]. Based on this, aromatherapy and acupoint massage are carried out to increase the intervention of primipara in natural childbirth. Aromatherapy is a therapy that diffuses and emits the aroma of essential oils through smoked lamps to soothe the mind of pregnant mothers, while acupoint massage stimulates the mothers' nerve center, relieves pain, and promotes natural childbirth^[7,8]. This article aims to study and analyze the effect of aromatherapy combined with acupoint massage on promoting the natural childbirth of primipara.

2. Materials and methods

2.1. General information

From May 2022 to May 2023, 100 primiparas who gave birth in the obstetrics department of the Nanjing Maternity and Child Health Hospital were recruited, and all primiparas were given lumbar puncture analgesia by experienced and trained anesthesiologists; at the same time, the ECG monitor closely monitors the primipara's blood pressure, oxygen saturation, and pulse rate for 2 hours. After the vital signs were stable, the experimental control study was started; the random number drawing method was used to divide the patients into the experiment group ($n = 50$) and the reference group ($n = 50$). The experiment group had an age range of 23–37 years old with an average age of 30.24 ± 1.55 years old, a pregnancy cycle of 39–42 weeks with an average pregnancy cycle of 40.35 ± 0.66 weeks, a body weight range of 19–22 kg/m² with an average body weight of 20.51 ± 1.22 kg/m². The reference group had an age range of 22–37 years old with an average age of 30.31 ± 1.49 years old, a pregnancy cycle of 40–42 weeks with an average pregnancy cycle of 40.43 ± 0.69 weeks, a body weight range of 19–21 kg/m² with an average body weight of 20.31 ± 1.18 kg/m². There was no statistically significant difference ($P > 0.05$) in general information such as age, pregnancy cycle, and body weight between the groups.

Inclusion criteria included primiparas, pregnant with one baby, full-term primiparas, and primiparas with informed consent.

Exclusion criteria included primiparas with pregnancy complications, primiparas with organ failure, and primiparas with coagulation dysfunction.

2.2. Methods

The reference group was given routine nursing care: observe the progress of the uterine contractions and labor process, and provide corresponding nursing measures.

The experiment group received aromatherapy and acupoint massage:

- (1) Aromatherapy: puerpera who received labor analgesia for 2 hours and whose vital signs were stable was led to a specific waiting room with the room temperature at about 25°C, and puerpera may choose a comfortable position to lie on. On the bed, soft pillows and other items can be used to support the waist of the puerpera. Safe essential oils were used and put on the incense lamp and the aroma of essential oils was spread in the room.
- (2) Acupoint massage: Sanyinjiao, Zusanli, Kunlun, Hegu, and other acupoints were selected during the incubation period. Quchi, Baihui, Fengchi, Taiyang, Yintang, Jianjing, and other acupoints were added during the active period. Avoid massage during the painful period of uterine contraction. Continue to massage each acupoint for about 3 seconds, then relax for 1 second, and repeat the massage for 5 groups. The intensity should be soft and steady.

2.3. Observation indicators

The observation indicators in this study included:

- (1) The adverse emotions were compared between the groups, and evaluated with the Self-Rating Anxiety

Scale (SAS score) and the Self-Rating Depression Scale (SDS score).

- (2) The degree of pain and sleep quality were compared between the groups, evaluated by Visual Analog Scale (VAS score) with 0–10 points and by Pittsburgh Sleep Quality Index (PSQI score) with 20–80 points, respectively.
- (3) The time of labor between the groups was compared, including the time of the first stage of labor, the second stage of labor, and the third stage of labor.
- (4) Satisfaction between groups was compared and evaluated with a self-made satisfaction scale and categorized into very satisfied, average, and dissatisfied.

2.4. Statistical analysis

SPSS 21.0 statistical software was selected to process and analyze the data, the count data were expressed by the number of cases (*n*) and percentage (%), the χ^2 test was implemented; the measurement data were expressed by the mean \pm standard deviation (SD), and the *t*-test was implemented. $P < 0.05$ was considered statistically significant.

3. Results

3.1. Comparing the negative emotions of the experiment group and the reference group

Before the nursing, the negative emotions such as anxiety and depression in the two groups were compared, and there was no statistically significant difference ($P > 0.05$); after the nursing, the anxiety, depression, and other negative emotions in the experiment group were significantly better than those in the reference group ($P < 0.05$). See **Table 1** for details.

Table 1. Comparison of bad emotions between groups (mean \pm SD, points)

Group	Number of cases	Anxiety		Depression	
		Before the nursing	After the nursing	Before the nursing	After the nursing
Experiment group	50	52.21 \pm 5.61	34.28 \pm 4.27	53.77 \pm 5.49	33.24 \pm 4.51
Reference group	50	52.31 \pm 5.45	41.27 \pm 4.61	53.81 \pm 5.68	40.58 \pm 4.29
<i>t</i> value	-	0.0904	7.8658	0.0358	8.3380
<i>P</i> value	-	0.9281	0.0000	0.9715	0.0000

3.2. Comparing the pain degree and sleep quality between the experiment group and the reference group

Before the nursing, the pain degree and sleep quality of the two groups were compared, and there was no statistically significant difference ($P > 0.05$); after the nursing, the pain degree and sleep quality of the experiment group were significantly better than those of the reference group ($P < 0.05$). See **Table 2** for details.

Table 2. Comparison of pain degree and sleep quality between groups (mean \pm SD, points)

Group	Number of cases	Pain degree		Sleep quality	
		Before nursing	After nursing	Before nursing	After nursing
Experiment group	50	8.68 \pm 1.14	5.24 \pm 1.68	7.55 \pm 1.65	5.21 \pm 1.57
Reference group	50	8.66 \pm 1.51	6.84 \pm 1.75	7.49 \pm 1.76	6.88 \pm 1.34
<i>t</i> value	-	0.0747	4.6637	0.1758	5.7209
<i>P</i> value	-	0.9406	0.0000	0.8608	0.0000

3.3. Comparing the labor time between the experiment group and the reference group

Table 3 showed that the time spent in the first stage of labor, the second stage of labor, and the third stage of labor in the experiment group were significantly lower than that in the reference group ($P < 0.05$).

Table 3. Comparison of labor time between groups (mean \pm SD)

Group	Number of cases	The first stage of labor (h)	The second stage of labor (min)	The third stage of labor (min)
Experiment group	50	8.57 \pm 2.57	49.22 \pm 10.68	7.55 \pm 2.51
Reference group	50	10.66 \pm 2.43	70.58 \pm 12.69	9.75 \pm 2.61
<i>t</i> value	-	4.1783	9.1063	4.2960
<i>P</i> value	-	0.0001	0.0000	0.0000

3.4. Comparing the satisfaction of the experiment group and the reference group

Table 4 showed that the satisfaction degree of the experiment group was significantly higher than that of the reference group ($P < 0.05$).

Table 4. Satisfaction comparison between groups (mean \pm SD)

Group	Number of cases	Very satisfied	Generally satisfied	Dissatisfied	Total satisfaction rate
Experiment group	50	41 (82.00)	9 (18.00)	0 (0.00)	50 (100.00)
Reference group	50	28 (56.00)	17 (34.00)	5 (10.00)	45 (90.00)
χ^2 value	-	-	-	-	5.2632
<i>P</i> value	-	-	-	-	0.0217

4. Discussion

Primiparas experience childbirth for the first time, are not familiar with the process of childbirth, and do not have enough experience in childbirth. They will have psychological emotions such as tension and anxiety when facing the pain of uterine contractions and childbirth^[9,10]. Negative emotions will have a serious impact on the delivery of the parturient, such as aggravated pain, prolonged labor, inability to give birth naturally, etc.^[11]. The midwifery work of primipara is the current focus of clinical attention^[12]. Epidural anesthesia is a commonly used method of labor analgesia by obstetricians. This method of labor analgesia is easily accepted by puerpera and their families and is widely used in clinical practice, but there are still some shortcomings. Epidural anesthesia for labor analgesia can induce fetal distress, cause severe asphyxia in the newborn, inhibit uterine contraction, and cause uterine contraction fatigue, which is not conducive to the development of the labor process and increases the incidence of cesarean section and assisted vaginal delivery. Hence, intervention measures for the natural childbirth of primiparas from the perspective of nursing were taken to relieve maternal emotions, reduce maternal pain, and accelerate the progress of labor^[13]. During the delivery process, the puerpera needs to experience uterine contraction pain for a long time and may experience adverse phenomena such as hyperventilation and physical exhaustion. Under the influence of various factors, cesarean section will eventually be used for delivery^[14]. Traditional Chinese medicine defines labor pain as poor circulation of blood and qi, and some means and measures need to be taken to promote the circulation of blood and qi to relieve pain. Aromatherapy is a new type of intervention that green and safe essential oils were chosen, smoked lamps were used to diffuse the aroma of essential oils, the temperature in the room was adjusted, and the aromas were fully dissipated. It can promote blood flow in the body, relieve muscle tension, and stretch bad emotions^[15].

Acupoint massage promotes blood circulation by stimulating acupuncture points, relieves maternal pain, and also improves mood to a certain extent.

Before the implementation, the anxiety, depression, and other negative emotions of the two groups were compared, and there was no statistically significant difference ($P > 0.05$), after the nursing, the anxiety, depression, and other negative emotions of the experiment group were significantly better than those of the reference group ($P < 0.05$). Before the nursing, the pain degree and sleep quality of the two groups were compared, and there was no statistically significant difference ($P > 0.05$), after the nursing, the pain degree and sleep quality of the experiment group were significantly better than those of the reference group ($P < 0.05$). The time spent in the first stage of labor, the second stage of labor, and the third stage of labor in the experiment group were significantly lower than that in the reference group ($P < 0.05$). The satisfaction degree of the experiment group was significantly higher than that of the reference group ($P < 0.05$).

In summary, aromatherapy has a better effect on improving the mood of patients. It can relax the muscles and ligaments of the uterus, relieve pain, prevent excessive physical exertion of the parturient, and prepare for the third stage of labor. Acupressure stimulates nerve conduction, increases the pain threshold, stimulates the release of serotonin, and relieves pain. The joint application of aromatherapy and acupoint massage can strengthen the improvement effect on maternal mood, reduce the pain caused by uterine contractions, improve sleep quality, shorten the time of each labor process, speed up childbirth, and achieve ideal satisfaction. It is worthy of widespread clinical application and promotion.

Disclosure statement

The author declares no conflicts of interest.

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