BIOLOGICALLY BASED COMPLEMENTARY METHODS USED IN THE CONTROL OF LABOR PAIN: AROMATHERAPY AND PHYTOTHERAPY

Esra KARATAŞ OKYAY<sup>1</sup> Zeliha SUNAY<sup>2</sup>

**ABSTRACT** 

Although pregnancy and childbirth are physiological events, the pain that occurs due to uterine contractions during labor is defined as one of the strongest pains and is among the important factors that cause many women to fear labor. Therefore, control of labor pain is one of the main goals of care for women who have given birth. The aim of the methods used to relieve pain in childbirth is to reduce or regulate labor pain directly without causing any negative effects on the mother and the baby. For this reason, biological-based complementary methods such as aromatherapy and phytotherapy used in the control of labor pain are used. The use of biologically-based complementary modalities such as aromatherapy in pregnancy and childbirth can reduce anxiety, facilitate relaxation, alleviate labor pain, and have a positive effect on fatigue, delivery time, delivery outcomes, and maternal satisfaction. In addition, since the use of non-drug methods such as aromatherapy in childbirth contributes to the easy management of labor and to reduce cesarean/interventional deliveries, it is recommended that midwives/nurses be competent to use these methods.

Key words: Aromatherapy, phytotherapy, labor pain, complementary methods, midwifery

DOĞUM AĞRISININ KONTROLÜNDE KULLANILAN BİYOLOJİK TEMELLİ TAMAMLAYICI YÖNTEMLER: AROMATERAPİ VE FİTOTERAPİ

ÖZET

Gebelik ve doğum fizyolojik olaylar olmasına rağmen, doğum sırasında uterus kasılmalarına bağlı olarak ortaya çıkan ağrı, en şiddetli ağrılardan biri olarak tanımlanır ve birçok kadının doğumdan korkmasına neden olan önemli faktörler arasında yer alır. Bu nedenle doğum ağrısının kontrolü, doğum eyleminde ebelik bakımının ana hedeflerinden biridir. Doğumda ağrıyı gidermek için kullanılan yöntemlerin amacı, anne ve bebek üzerinde herhangi bir olumsuz etkiye yol açmadan doğrudan doğum ağrısını azaltmaktır. Bu nedenle doğum ağrısının kontrolünde aromaterapi ve fitoterapi gibi biyolojik temelli tamamlayıcı yöntemler kullanılabilir. Gebelik ve doğumda aromaterapi gibi biyolojik temelli tamamlayıcı yöntemlerin kullanımı kaygıyı azaltabilir, gevşemeyi

<sup>1</sup> Res. Asst. Dr., İnönü University Faculty of Health Sciences, Department of Midwifery, Malatya/Turkey <a href="mailto:esrakaratas44@hotmail.com">esrakaratas44@hotmail.com</a>, ORCID ID: 0000-0002-6443-8277

<sup>2</sup> Dr. Midwife, zelal.sunay.62@gmail.com, ORCID ID: 0000-0001-9375-4300

kolaylaştırabilir, doğum ağrısını hafifletebilir ve yorgunluk, doğum süresi, doğum sonuçları ve anne memnuniyeti üzerinde olumlu bir etkiye sahip olabilir. Ayrıca doğumda aromaterapi gibi ilaç dışı yöntemlerin kullanılması, doğumun kolay yönetilmesine ve sezaryen/girişimsel doğumların azaltılmasına katkı sağladığından, ebe/hemşirelerin bu yöntemleri kullanma konusunda yetkin olması önerilir.

Anahtar kelimeler: Aromaterapi, fitoterapi, doğum ağrısı, tamamlayıcı yöntemler, ebelik

## INTRODUCTION

Although the birth process is accepted by most people as a natural process, women experience serious physiological changes, anxiety, tension and some emotional changes in this process. Each birth is unique and the labor pain felt by the woman is affected by a number of factors such as psychological, physical, environmental, political and emotional conditions. Despite the advances in medicine, controlling labor pain still remains a challenge in the field of obstetrics (Demirgöz Bal, Dereli Yılmaz, & Berkiten Ergin, 2017; Ergin & Mallı, 2019; Luo, Huang, Xia, & Zeng, 2014; Massomeh, Nassimeh Setayesh, Leila, & Hamid, 2014).

Labor pain, known as acute pain, is one of the most severe types of pain known. However, it is different from other types of pain in that this pain is a natural part of the birth process, occurs in a limited time period, and the mother ignores these pains with the excitement of reuniting with her baby (Edirne, 2007; Ertem & Sevil, 2005; Kayhan, 2007). However, when labor pain is not tolerated, it negatively affects the health of the mother and fetus. For this reason, the American Society of Anesthesiology (ASA) and the American Society of Obstetrics and Gynecology (ACOG) have accepted labor pain as an indication for treatment (Mamuk & Davas, 2010). Some pharmacological methods, such as epidural analgesia, are known to be quite effective for coping with labor pain, and non-pharmacological methods are also used to reduce labor pain. The basic mechanism of non-pharmacological methods, which have become widespread in order to reduce labor pain, is based on the minimal perception of pain by allowing the woman to relax without the use of drugs. Non-pharmacological methods increase the comfort at birth, the mother's birth satisfaction, and the bond between mother and baby (Chaillet et al., 2014; Varışoğlu & Ünlü, 2020). The most commonly used complementary medicine and practices to control labor pain, mind-body interventions (yoga, hypnosis, relaxation therapies), all medical systems (homeopathy, traditional Chinese medicine), manual (reflexology), pharmacological methods and biological treatments, electromagnetic applications (magnets) and herbal medicine (Ergin & Malli, 2019; Smith, Collins, & Crowther, 2011). Complementary and alternative therapy (CAM) is also widely

used in obstetrics, and women use complementary methods that are appropriate for their own cultural structures in order to reduce labor pain and manage the progression of labor. One of the oldest non-drug methods used to cope with labor pain is herbal treatments (Amanak, Karaöz, & Sevil, 2013; Asazawa, Kato, Yamaguchi, & Inoue, 2017).

# **Aromatherapy**

It has been known that natural products and plants have been used for the treatment of diseases or the protection of health since ancient times. The World Health Organization (WHO) states that aromatherapies, which have a very strong and ancient history, have an important effect in the treatment of chronic diseases, relieving pain, reducing stress and anxiety, or increasing the quality of life of the person (Ergin & Malli, 2019; Organization, 2013). Aromatherapy is the use of highly concentrated essential oils and fragrances distilled from plants for the purpose of treatment (Ergin & Mallı, 2019; Yılar Erkek & Pasinlioğlu, 2016). In aromatherapy, direct access to the cerebral cortex is achieved through connections extending to the limbic system and the hypothalamus through scent. The odor reaching the cortex affects the individual psychologically, behaviorally and physically. As a result of the effect of aromatherapy on the central nervous system, relaxation is provided. With the information flow reaching the brain as a result of the stimulus of the central nervous system, the energy blockage in the body is broken. In addition, aromatherapy is thought to increase neurotransmitters that have a relaxing effect in the body, such as acetylcholine, dopamine, and serotonin. Oils are applied to the skin by massaging, inhalation and inhalation of odors resulting from the burning of oils (Ergin & Malli, 2019; Yılar Erkek & Pasinlioğlu, 2016). In aromatherapy, which originated from ancient Egyptian and Indian civilizations centuries ago, oils are often combined with the therapeutic effect of massage. Other uses include adding aromatic agents to bath water, sprinkling them on clothes or bedding, and using them as inhalers and burning them as incense. More than 60 types of medicinal plants are used in aromatherapy. Lavender oil, sweet orange oil, rose oil, jojoba oil, olive oil, geranium, sage, juniper, jasmine, sandalwood, eucalyptus and various incense are the most well-known aromatic herbs (Kuriyama et al., 2005; Mamuk & Davas, 2010). In the literature, it is reported that aromatherapy protects the body and soul balance, provides relaxation by breathing a nice smell, reduces anxiety, fear, pain, nausea and vomiting, and increases the sense of well-being in people (Cooke & Ernst, 2000; Imanishi et al., 2009). One of the oldest non-drug methods used in the control of labor pain is aromatherapy. The mechanism of the analgesic effect of aromatherapy is not clear. In studies on the use of essential oils, it has been reported that there is no significant change in physiological parameters, but

this method significantly improves mood. Studies on the use of aromatherapy to reduce labor pain gained momentum between 1996 and 2002, and it still maintains its importance (Ergin & Malli, 2019). Aromatherapy is performed by applying essential oils such as rose, lavender, neroli and sage to the skin of the expectant mother during childbirth (Yılar Erkek & Pasinlioğlu, 2016). In a study conducted by Burns et al. on pregnant women, it was reported that more than 50% of pregnant women found the use of aromatherapy at birth to be effective (Simkin & Bolding, 2004). In a study conducted by Ergin and Mallı to systematically analyze current information and studies on aromatherapies used in childbirth, it was reported that aromatherapies used in childbirth reduced anxiety, facilitated relaxation and alleviated labor pain (Ergin & Malli, 2019). In a study examining the effects of aromatherapy during labor, it was determined that pregnant women who received aromatherapy perceived labor pain less in the active and transitional phases (Karabulut, 2014). In the study conducted by Cenkci and Nazik, in which the pain, comfort and satisfaction levels of pregnant women were evaluated, it was found that aromatherapy reduced women's pain and increased their comfort and satisfaction levels (Cenkci, 2017). In a meta-analysis conducted by Chen et al. to determine the effect of aromatherapy on labor pain and duration, it was found that aromatherapy reduced labor pain and labor time (Chen et al., 2019). Esmaelzadeh Saeieh et al. evaluated the effect of inhalation aromatherapy on labor pain among nulliparous women (Esmaelzadeh-Saeieh, Rahimzadeh, Khosravi-Dehaghi, & Torkashvand, 2018). It has been found that inhalation aromatherapy has positive effects on labor pain (Ergin & Malli, 2019). In a study conducted by Heidari-Fard et al. to determine the effect of chamomile scent on labor contractions in primiparous women, it was determined that the contractions of pregnant women who received aromatherapy at 5-7 cm dilatation were significantly lower than the control group and their satisfaction levels were higher (Heidari-Fard, Mohammadi, & Fallah, 2018).

# **Phytotherapy (Herbal Treatments)**

Phytotherapy (phytos=plant, therapy=treatment) means herbal treatment and its history dates back to ancient times. It means treating diseases with tea, drops, dragees, capsules, syrups, tablets produced using fresh or dried plant parts with therapeutic value or extraction products obtained from them (Kömürcü & Berkiten Ergin, 2008). Although the use of plants increases rapidly during pregnancy and childbirth, since plants are considered to be natural and therefore do not pose a risk, some plants have also been reported to have negative effects on the newborn and mother (Dika, Dismas, Iddi, & Rumanyika, 2017). In Anatolian culture; It is believed that drinking the water in which the plant called "Virgin Mary's Hand" is placed facilitates

childbirth (Yılar Erkek & Pasinlioğlu, 2016). In a study conducted by Dika et al. to determine the factors and prevalence associated with the use of herbs during labor, it was found that approximately one-fourth of women used herbal treatment during childbirth and women recommended the use of these herbs (Dika et al., 2017). In a study conducted in Malawi to determine the herbs used by pregnant women to initiate labor, it was found that 94% of women consumed corn to accelerate labor and the rest drank herbal tea (Maliwichi-Nyirenda & Maliwichi, 2010). In a study by Zafar et al. comparing the use of Pentazocine and Chamomilla recutita for the reduction of labor pains, the difference in mean pain scores in the Pentazocine and Chamomilla recutita groups when compared with placebo was not found to be statistically significant (Zafar, Najam, Arif, & Hafeez, 2016).

## CONCLUSION AND RECOMMENDATIONS

As a result, labor pain is a very important life experience for every woman. It is extremely important for women to carry out and end this process in the best way possible. Aromatherapies used in labor can reduce anxiety, facilitate relaxation, and reduce labor pain. Combining essential oils with other complementary therapies such as massage and acupuncture may contribute to the acceptance of these treatments. Biological-based complementary methods can be applied in labor in order to help the pregnant to cope with labor pain, to increase the quality of life, and to ensure that the pregnant woman experiences labor as problem-free as possible. For this reason, the midwife and nurse should know the effects and limitations of complementary medicine methods in coping with labor pain and help the pregnant woman in the effective application of these methods.

## **REFERENCES**

- Amanak, K., Karaöz, B., & Sevil, Ü. (2013). Alternatif/Tamamlayıcı Tıp ve Kadın Sağlığı. TAF Preventive Medicine Bulletin, 12(4).
- Asazawa, K., Kato, Y., Yamaguchi, A., & Inoue, A. (2017). The effect of aromatherapy treatment on fatigue and relaxation for mothers during the early puerperal period in Japan: a pilot study. *International journal of community based nursing and midwifery*, 5(4), 365.
- Cenkci, Z. (2017). The effect of aromatherapy on pain, comfort and satisfaction during childbirth. *New Trends and Issues Proceedings on Humanities and social sciences*, 4(2), 11-19.
- Chaillet, N., Belaid, L., Crochetiere, C., Roy, L., Gagné, G. P., Moutquin, J. M., . . . Bonapace, J. (2014). Nonpharmacologic approaches for pain management during labor compared with usual care: a meta-analysis. *Birth*, *41*(2), 122-137.
- Chen, S.-F., Wang, C.-H., Chan, P.-T., Chiang, H.-W., Hu, T.-M., Tam, K.-W., & Loh, E.-W. (2019). Labour pain control by aromatherapy: A meta-analysis of randomised controlled trials. *Women and Birth*, *32*(4), 327-335.
- Cooke, B., & Ernst, E. (2000). Aromatherapy: a systematic review. *British journal of general practice*, 50(455), 493-496.
- Demirgöz Bal, M., Dereli Yılmaz, S., & Berkiten Ergin, A. (2017). *Ebelere Yönelik Kapsamlı Doğum (1. Baskı)*. Ankara: Akademisyen Kitabevi.
- Dika, H. I., Dismas, M., Iddi, S., & Rumanyika, R. (2017). Prevalent use of herbs for reduction of labour duration in Mwanza, Tanzania: are obstetricians aware? *Tanzania Journal of Health Research*, 19(2).
- Edirne, S. (2007). Ağrı (1. Baskı). İstanbul: Nobel Tıp Kitabevleri.
- Ergin, A. B., & Mallı, P. (2019). Doğumda Kullanılan Aromaterapiler: Sistematik Derleme. Kocaeli Üniversitesi Sağlık Bilimleri Dergisi, 5(2), 72-80.
- Ertem, G., & Sevil, Ü. (2005). Doğum ağrısı ve hemşirelik yaklaşımı. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 8(2), 117-123.

- Esmaelzadeh-Saeieh, S., Rahimzadeh, M., Khosravi-Dehaghi, N., & Torkashvand, S. (2018). The effects of inhalation aromatherapy with Boswellia carterii essential oil on the intensity of labor pain among nulliparous women. *Nursing and Midwifery Studies*, 7(2), 45-49.
- Heidari-Fard, S., Mohammadi, M., & Fallah, S. (2018). The effect of chamomile odor on contractions of the first stage of delivery in primpara women: A clinical trial. *Complementary therapies in clinical practice*, *32*, 61-64.
- Imanishi, J., Kuriyama, H., Shigemori, I., Watanabe, S., Aihara, Y., Kita, M., . . . Kunisawa,
  M. (2009). Anxiolytic effect of aromatherapy massage in patients with breast cancer.
  Evidence-Based Complementary and Alternative Medicine, 6(1), 123-128.
- Karabulut, H. (2014). *Doğum Eyleminde Aromaterapinin Etkileri* (Yüksek lisans tezi). İtanbul Üniversitesi, İstanbul.
- Kayhan, Z. (2007). Klinik Anestezi. (3. Baskı). İstanbul: Logos Yayıncılık.
- Kömürcü, N., & Berkiten Ergin, A. (2008). *Doğum Ağrısının Kontrolünde Non-Farmakolojik Yöntemler*. İstanbul: Bedray Yayıncılık.
- Kuriyama, H., Watanabe, S., Nakaya, T., Shigemori, I., Kita, M., Yoshida, N., . . . Fukui, K. (2005). Immunological and psychological benefits of aromatherapy massage. *Evidence-Based Complementary and Alternative Medicine*, 2(2), 179-184.
- Luo, T., Huang, M., Xia, H., & Zeng, Y. (2014). Aromatherapy for laboring women: a metaanalysis of randomized controlled trials. *Open Journal of Nursing*, 2014.
- Maliwichi-Nyirenda, C. P., & Maliwichi, L. L. (2010). Medicinal plants used to induce labour and traditional techniques used in determination of onset of labour in pregnant women in Malawi: A case study of Mulanje district. *Journal of Medicinal Plants Research*, 4(24), 2609-2614.
- Mamuk, R., & Davas, N. İ. (2010). Doğum ağrısının kontrolünde kullanılan nonfarmakolojik gevşeme ve tensel uyarılma yöntemleri. *Şişli Etfal Hastanesi Tıp Bülteni, 44*(3), 137-144.
- Massomeh, K., Nassimeh Setayesh, V., Leila, N., & Hamid, H. (2014). < A> Controlled trial of the effect of Aromatherapy on birth outcomes using" Rose Essential Oil" inhalation and foot bath.

- Organization, W. H. (2013). WHO traditional medicine strategy: 2014-2023: World Health Organization.
- Simkin, P., & Bolding, A. (2004). Update on nonpharmacologic approaches to relieve labor pain and prevent suffering. *Journal of Midwifery & Women's Health*, 49(6), 489-504.
- Smith, C. A., Collins, C. T., & Crowther, C. A. (2011). Aromatherapy for pain management in labour. *Cochrane Database of Systematic Reviews*(7).
- Varışoğlu, Y., & Ünlü, G. (2020). Türkiye'deki tezlerde doğum ağrısının yönetiminde kullanılan nonfarmakolojik yöntemlerin incelenmesi.
- Yılar Erkek, Z., & Pasinlioğlu, T. (2016). Doğum Ağrısında Kullanılan Tamamlayıcı Tedavi Yöntemleri. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi, 19*(1), 71-77.
- Zafar, S., Najam, Y., Arif, Z., & Hafeez, A. (2016). A randomized controlled trial comparing Pentazocine and Chamomilla recutita for labor pain relief. *Homeopathy*, 105(01), 66-70.