Lavender Essence for Post-cesarean Pain

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Abstract: Post Cesarean (CS) pain is a challenging problem for the obstetricians, because it may interfere with mother and baby’s well-being. Many approaches have been ever proposed to diminish this pain, each one with particular benefits and limitations. Aromatherapy is a complementary therapy especially for controlling pain. This study aimed at evaluating the effect of lavender essence on post CS pain. In a single-blind clinical trial, 200 term pregnant women with planned elective CS were recruited in a 12 month period of time. They were randomized in two 100-patient groups; received either lavender essence (the case group) or a similar clinically neutral aromatic material (the control group) thorough oxygen mask for 3 min 3 h after receiving similar intravenous analgesics. The Visual Analogue Scale (VAS) was employed to determine the level of post CS pain. The VAS was documented half hour after first intervention. Eight and 16 h later, the aromatherapy was repeated and half hour after each intervention, corresponding VAS was documented. The two groups were matched for demographics and obstetrical history. The baseline VAS was comparable between the two groups. The mean VAS decreased significantly by 16 h after the first intervention in both groups (p<0.001). However, this amelioration of pain was significantly more prominent in the cases group comparing with that in the controls in all documented stages half hour, 8 and 16 h after the first intervention (p<0.001 for all measurements). In conclusion, aromatherapy by using lavender essence is a successful and safe complementary therapy in reducing pain after CS.

Key words: Lavender, elective cesarean section, post-operative pain, aromatherapy, visual analogue scale

INTRODUCTION

Pain is an unpleasant feeling which may indicate presence of an underlying pathologic process. Fear of pain could lead to delayed diagnosis and treatment (Townsend et al., 2001). Cesarean Section (CS) is a very common operation all over the world. The rate of this operation reaches near 50% of all types of deliveries in Iran (Ganj et al., 2006). Like any other surgery, postoperative pain is frequently reported after CS. More than half the patients report this pain severe or very severe (Stuart and Laraia, 2000). Management of this pain is very important for mother, nursing of infant and breast feeding (Rahmanpoor et al., 2007). The post CS pain can be managed by opiates and their derivates, non steroid anti inflammatory drugs (NSAIDs) and different types of anesthesia. (Olofsson et al., 2000; Lim et al., 2001; Rashid and Jarudi, 2000; Gita-Shoeibi et al., 2007; Miller et al., 2005; Rasooli and Moslemi, 2007; Behnamfar et al., 2006; Mohammadi and Seyedi, 2008). However, their liberal use is limited due to potential side effects, unavailability in all centers, substantial limitation in efficacy and safety and the cost (Goodman et al., 2001). Nowadays, alternative or complementary nonpharmacological treatments are getting enthusiasm from many physicians and patients (Cornwell and Dale, 1995). Aromatherapy is one of these alternative treatments which is thought to be effective in pain relief and improving anxiety, depression, insomnia, fatigue, asthma, etc. (Carroll and Bowsher, 1994). Lavender essence is an aromatic herbal material with anti-pain properties. Lavender oil has been successfully utilized to alleviate pain in different conditions such as changing dressings, palliative care, for control of labor pain, as well as chronic pain (Kim et al., 2006). To the best of our knowledge, however, there is no similar report in the English literature about use of this material for control of post CS pain. The aim of this study was to assess the post CS pain control by aromatherapy using lavender essence.

MATERIALS AND METHODS

Subjects: In this single blind clinical trial, 200 pregnant women at term undergoing elective CS were recruited in Tabriz Taleghani Teaching Centre in a 12-month period of time from June 2010 to June 2011. The patients were
randomized in two 100-patient groups and carried into two different rooms 6-8 h post operation. The inclusion criteria were using spinal anesthesia, absence of intra abdominal manipulation/adhesion, no concurrent operation and duration of operation less than 90 min. Emergence of any post CS complications was considered as exclusion criteria.

**Visual analogue scale:** The severity of pain was documented based on the Visual Analogue Scale (VAS). The VAS is a standard tool like a 10 cm ruler including 0 numbers begin from 0 (no pain) and end to 10 (most severe pain). The patient was asked to select a number based on severity of pain she feels (Johnson, 2005).

**Lavender essence:** The lavenders (Lavandula) are a genus of 39 species of flowering plants in the mint family, Lamiaeace (Bailey, 1949). In this study, shrubs of the plant were gathered from a plant biology greenhouse, Tabriz University of Medical Sciences. The root and stalk were used for preparing 2% lavender essence. The placebo was artificial aromatic material similar to lavender essence produced by pharmaceutical staff of Tabriz University of Medical Sciences. They confirmed that this was a clinically neutral material in a pilot study.

**Study design:** At least 3 hours after receiving similar intravenous analgesics, the baseline VAS was recorded. Two drops (about 1 cc) of 2% lavender essence were applied with a cotton swab to the inside of an oxygen face mask in the case group. Patients in the control group received oxygen through a face mask with the placebo. The mask was used for 3 min. Half hour later the VAS was documented again (stage 1). The same processes were repeated again 8 (stage 2) and 16 (stage 3) hours later. Finally, the VAS scores were compared between the two groups.

**Statistical analysis:** Statistical evaluation was made using SPSS for Windows V 18.0 (SPSS Inc., II, USA). Data were shown as frequency (percentage) or Mean-standard deviation (SD). Independent samples T, chi-square, Fishers' Exact and Repeated Measures analysis tests were employed for statistical analysis. The p-values less than 0.05 were regarded as significant.

**RESULTS AND DISCUSSION**

The two groups were matched for age, education level, occupation, gravidity, parity, previous CS and its number and previous history of abortion and its number. The mentioned variables are summarized and compared between the two groups in Table 1.
CONCLUSION

Aromatherapy by using lavender essence is effective in reducing pain after CS in women. This method is safe and easy to perform. However, it is only recommendable as a complementary method along with routine pain management.

REFERENCES


