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File: ■ Lavender (*Lavandula angustifolia*)

■ **Massage**

■ **Aromatherapy**

■ **Infantile Colic**

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RE: Abdominal Massage with Diluted Lavender Oil Decreases Symptoms of Infantile Colic

Çetinkaya B, Başbakkal Z. The effectiveness of aromatherapy massage using lavender oil as a treatment for infantile colic. *Int J Nurs Pract.* April 2012;18(2):164-169.

Infantile colic is a syndrome that is characterized by uncontrollable crying (usually in the afternoon and evening), clenching of fists, drawing the legs in the abdomen, and passing gas. Infantile colic usually starts around the first 3 months of life and, based on the Wessel criteria, lasts at least 3 weeks, for at least 3 days a week, for more than 3 hours a day. These unexplained crying episodes can continue to 4-6 months of age. Although the causes of infantile colic are still not known, some possible explanations include: cow's milk or soy (*Glycine max*) protein allergy or intolerance, gastrointestinal problems, parent-child relationship problems, and immaturity of the central nervous system.

Although some therapies are reported as effective for colic, few rigorous studies exist, especially for alternative therapies. Abdominal massage is one alternative therapy widely used in Europe. Several studies have shown that it reduces the symptoms of colic. Other studies have investigated massage with essential oils for a variety of other conditions. Lavender (*Lavandula angustifolia*) essential oil has sedative and antispasmodic properties, suggesting it may relieve colic. Thus, the aim of this quasi-experimental, randomized, controlled trial was to investigate the effectiveness of abdominal massage using diluted lavender oil for the treatment of infantile colic.

The research population in this study consisted of mothers and infants from high, medium, and low socioeconomic groups living in the Denizli region of Turkey. Using an unspecified random sampling method, 1 public health clinic from each socioeconomic group was chosen for this study. There were 20 infants in the control group and 20 infants in the treatment group. The infants were between 2-6 weeks of age, following a gestational age of 38-42 weeks, weighed between 2500-4000 g (5.5-8.8 lbs) at birth, had normal development and growth, and exhibited signs of colic (crying at least 3 hours a day for more than 3 days a week). Diagnosis was confirmed after examination by pediatricians, abdominal ultrasound, and inspection of urine and fecal matter. A total of 92 mothers of infants that met the research criteria of colic were interviewed by telephone. From this group, 51 mothers affirmed the presence of infant colic and were told to record the infant's crying for 7 days.

After analyzing this data, 42 infants were identified as having colic and qualified for this study.

A total of 5 observations, each a week apart, were carried out to monitor the infants using the Wessel criteria. The mothers recorded any crying that lasted more than 15 minutes for the period of 1 week, and researchers monitored the babies during weekly house visits. The mothers in the treatment group were given abdominal massage training at home and were told to make a solution of 1 drop of lavender oil (manufacturer unknown) mixed with 20 mL of almond oil. They were to use 1 cc per day of the solution when performing abdominal massage (5-15 minutes) on the infants within 1-2 minutes of the colic attack. For the control group, the mothers did not use aromatherapy or massage with their infants; however, the mothers were offered massage training after the study was completed to encourage them to remain in the study.

A total of 40 infants completed the study. The randomization process took into consideration age, birth order, weight, weekly crying time, whether the baby was breastfed or not, and the sex of the infant. Comparison of weekly crying time by observation of treated infants and infants in the control group indicated a statistically significant difference between the groups ($P < 0.05$). From the first observation, the mean weekly crying times decreased in the lavender group, whereas the control group did not show any changes in the mean weekly crying times during the study period. There were statistically significant differences between all the measurements from the treatment group in comparison to preliminary measurements taken before aromatherapy massage treatment ($P < 0.01$). However, there were no significant differences found between the measurements for the control group in comparison to preliminary observations ($P > 0.01$).

The authors conclude that aromatherapy massage with lavender oil could be effective for the reduction of infantile colic. The authors further support the results of this study by stating that both massage and aromatherapy massage are considered to decrease anxiety, aid with muscle relaxation, as well as pain, and that lavender oil has antispasmodic effects. Other aromatic herbs that have effectively treated colic when administered orally were also referenced in this study, including fennel (*Foeniculum vulgare*), German chamomile (*Matricaria recutita*), and lemon balm (*Melissa officinalis*).^{1,2} Although this study indicated a reduction of infantile colic symptoms after using massage and aromatherapy together, this study does not assess if abdominal massage alone is any different than massage with lavender oil, nor does this study compare lavender oil aromatherapy alone to the control or the combination; though the author does mention two previous studies that were done on infantile colic and abdominal massage which did find that infantile abdominal massage only was effective in decreasing crying time and symptoms of colic. Understanding these differences may provide more information on the specific benefits of using abdominal massage, aromatherapy massage, or aromatherapy with lavender oil.

—Laura M. Bystrom, PhD

References

¹Alexandrovich I, Rakovitskaya O, Kolmo E, Sidorova T, Shushunov S. The effect of fennel (*Foeniculum vulgare*) seed oil emulsion in infantile colic: a randomized, placebo-controlled study. *Altern Ther Health Med*. July-August 2003;9(4):58-61.

²Savino F, Cresi F, Castagno E, Silvestro L, Oggero R. A randomized double-blind placebo-controlled trial of a standardized extract of *Matricariae [sic] recutita*, *Foeniculum vulgare* and *Melissa officinalis* (ColiMil®) in the treatment of breastfed colicky infants. *Phytother Res*. April 2005;19(4):335-340.

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