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AMERICAN
BOTANICAL
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File: ■ Lavender (*Lavandula angustifolia*)
■ Postoperative Pain
■ Tonsillectomy

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RE: With Lavender Aromatherapy, Children Required Fewer Analgesics following Tonsillectomy

Soltani R, Soheilipour S, Hajhashemi V, Asghari G, Bagheri M, Molavi M. Evaluation of the effect of aromatherapy with lavender essential oil on post-tonsillectomy pain in pediatric patients: A randomized controlled trial. *Int J Pediatr Otorhinolaryngol*. 2013;77(9):1579-1581.

Tonsillectomy is among the most common childhood surgeries. One of its main complications is pain, which can cause poor oral intake and dehydration post-surgery, leading to morbidity and delayed recovery. No ideal treatment is available. Because children may also experience postoperative nausea and vomiting, pain relievers delivered through non-oral routes are needed. Many aromatic and medicinal plants contain chemical compounds that make them appropriate for aromatherapy, which is noninvasive and can be applied continuously to patients. Lavender (*Lavandula angustifolia*) is used in traditional medicine for its analgesic and anti-inflammatory activities. These authors, from Iran, explain that in Iranian folk and traditional medicine, lavender is used as a carminative, diuretic, antiepileptic, antirheumatic, and pain reliever. They conducted a randomized, controlled, prospective research study to evaluate the effectiveness of aromatherapy with lavender essential oil on post-tonsillectomy pain in children.

The study, conducted at Isfahan (Iran) University of Medical Sciences, included 48 patients aged 6 to 12 years who underwent tonsillectomy. Following surgery, all patients received acetaminophen (10-15 mg/kg per dose) every 7 hours for pain. The patients in the treatment group (n=24) also inhaled lavender essential oil every 6 hours by applying 4 droplets of the oil on their palm, rubbing their hands together, and inhaling it for 3 minutes. Neither the manufacturer of the lavender essential oil nor the oil's chemical profile was included in the article.

The frequencies of daily use of acetaminophen and nocturnal awakening due to pain, as well as pain intensity, were recorded for each patient for the first 3 days after surgery. Pain intensity was assessed by using a visual analog scale (VAS).

The authors report that the use of lavender essential oil significantly reduced the frequency of acetaminophen use during each of the 3 postoperative days ($P < 0.001$). It did not, however, significantly impact pain intensity or frequency of nocturnal awakening.

The authors explain that the lack of effect on pain severity in this study and in previous studies may be due to the use of analgesic agents in both groups, making the assessment of pain intensity more difficult, and to the subjective nature of the VAS in measuring pain intensity.

The lack of a placebo in the control group and the small sample size are limitations of this study. Details regarding the essential oil should have been included in this article.

The authors conclude, "This study suggests that aromatherapy with lavender essential oil decreases analgesic requirement following tonsillectomy in pediatric patients. This could be a cost-effective, available and safe treatment option."

—*Shari Henson*

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