

## **A Pilot Study of Aromatherapy on Anxiety and Pain in Patients Undergoing Spinal Procedures**

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**Introduction:** Image-guided interventional pain procedures are increasingly common, yet patients frequently report anxiety and discomfort. Aromatherapy, particularly with *Lavandula angustifolia*, has emerged as a promising complementary and alternative medicine (CAM) approach. This study explored the feasibility and effectiveness of a nurse-led lavender aromatherapy intervention delivered via nasal inhaler pre & post procedure.

**Identification of the Problem:** Due to anxiety and pain, patients who are unable to tolerate an interventional pain procedure awake receive a pharmacological intervention either monitored anesthesia care, conscious sedation or a po prescription of diazepam. These options create potential complications during the procedure and increase the patient's fall risk post procedure.

**Purpose of the Study:** To evaluate the impact of *lavandula angustifolia*, on anxiety, pain, vital signs, patient engagement and satisfaction in individuals undergoing interventional pain procedures under fluoroscopy.

**Methodology:** A single-arm prospective pilot study was conducted. Fifty patients received a lavender personal nasal inhaler (PNI) pre and post procedure. Pre- and post-intervention measures included self-reported anxiety tool and pain scores, vital signs (blood pressure, heart rate, respiratory rate, oxygen saturation), and patient feedback on engagement and satisfaction.

**Results:** Statistically significant reductions were observed in anxiety levels and respiratory rate following aromatherapy use. No significant changes were found in blood pressure or pain scores. Patients reported high satisfaction and engagement with the intervention.

**Discussion:** The PNI can easily be given in a variety of PeriAnesthesia settings. A single nurse provided patient education and support in the use of the aromatherapy PNI within the timeframe of a routine visit. This non-pharmacologic modality can be used in combination with the more traditional methods of pain and stress relief.

**Conclusion:** Nurses play a central role in initiating/implementing aromatherapy. This study aimed to demonstrate a clear & simple approach to initiate aromatherapy in an outpatient clinic. The use of commercially available lavender nasal inhaler is feasible, well- received and can support reduced anxiety in patients undergoing interventional pain procedures.

**Implications for perianesthesia nurses and future research:** Lavender aromatherapy is a feasible, nurse-led, non-pharmacological intervention that may reduce anxiety and support patient comfort during outpatient interventional procedures. Further research is warranted to support findings, to explore its broader application and long-term benefits in procedural care settings.