Lavender: An Effective Agent For Anxiety?

History of Lavender:

Lavender has been used throughout history as an analgesic, antidepressant, antibacterial and antifungal agent, and sedative. It was used to treat psychiatric conditions in India and Tibet and is currently used in Spain as an antidiabetic. In Chile lavender tea is used to increase or induce menstrual flow. The leaves and flowers are used to relieve headaches and rheumatic pain and as a cold remedy. In Germany there is a patented lavender flower extract product called Silexan registered as a medicinal product to treat restlessness related to anxious mood.

Mechanism of action:

There are quite a few components of lavender that contribute to its various mechanisms of actions. These parts include the flower, leaves and oil. Even though lavender does have several effects, the mechanism of action in regard to anxiety is unknown. It is thought that oral lavender oil and lavender aromatic treatment induces relaxation and reduces anxiety levels.

Evidence

Study One:

Purpose: To assess the efficacy of lavender, in any form and way of administration, on anxiety and anxiety-related conditions.

Methods: Systematic review and meta-analysis consisting of 65 randomized controlled trials and 25 non-randomized studies where the efficacy of lavender was investigated for anxiety and anxiety-related conditions. The studies compared lavender to any type of control, did not have language restrictions and were obtained via Medline, Scopus, Web of Science, Cochrane Library, EMBASE and Google Scholar. The Cochrane risk-of-bias tool was used to assess the risk of bias in the included studies.

Primary outcome: Reduction in anxiety levels measured by any validated scale

Results: 54 randomized controlled trials and 17 non-randomized studies in the qualitative synthesis reported a significant result in lavender use for anxiety. For the quantitative synthesis, it showed that lavender inhalation significantly reduced anxiety levels with any validated scale, (Hedges g = -0.73 [95% CI -1.00 to -0.46], p<0.00001, 1682 participants).

Limitations: Low quality of available studies, high risk of bias in included studies, heterogeneity.

Authors conclusion: Since treatments with lavender essential oil are generally safe and the inhalation inexpensive, they are both therapeutics options to be considered in some clinical contexts for anxiety or anxiety-related conditions

Study Two:

Purpose: To evaluate the safety of lavender oil and compare the efficacy of different strengths of lavender oil and other interventions using a network meta-analysis

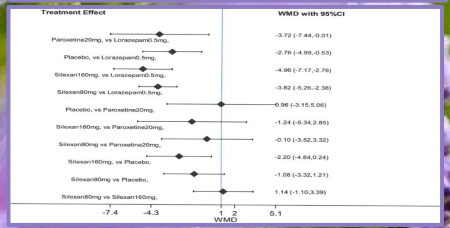
Methods: Network meta-analysis studies obtained from 8 different databases. Studies were included if they were human experimental studies with patients with anxiety disorder that were given either lavender orally (in capsules), a placebo, or any other medicinal product. Duplicate titles were removed and titles and abstracts were screened by two independent authors. The risk of bias was assessed for each RCT using the Cochrane risk of bias assessment tool.

Primary outcome: A change in Hamilton Anxiety Scale (HAMA) total score of the patients.

Results: Treatment with Silexan 160 mg was superior to Silexan 80 mg. Treatment with Silexan 160 mg was effective in comparison to placebo, paroxetine 20 mg, and lorazepam 0.5 mg. Silexan mainly caused GI side effects such as nausea and diarrhea

Limitations: Results were limited to the english language and excluded all observational studies. The authors screened 982 studies and only included 5, 31% of patients are male and almost all are caucasian. All studies were funded by the manufacturer.

Authors conclusion: Treatment of anxiety with Silexan 160 mg has been shown to be effective in relation to comparators, but with more occurrence of GI side effects. More studies are needed to get a comprehensive picture of the safety and efficacy of Silexan.



Dosing:

Lavender is available as an oil and an immediate release capsule

Orally: 80-160 mg lavender oil daily x 10 weeks (80mg/capsule)

To be diffused or applied topically: 3-5 drops of lavender essential oil

Safety and adverse reactions:

Drug Interactions: Theoretically, lavender causes CNS depressant effects. It is best to avoid concomitant use with any CNS depressant drugs or supplements to avoid potentiation of these effects. Lavender should also be discontinued 2 weeks before any surgery.

Adverse Reactions: Lavender is well tolerated in both small and large doses. Patients most commonly experience breath odor, constipation, diarrhea, dyspepsia, headache and nausea. When applied topically lavender oil can cause allergic contact dermatitis. Serious events include heart palpitations and gynecomastia.

Conclusion

If patients experiencing anxiety desire to use lavender to aid in alleviating their symptoms we would recommend using a USP verified product. The use of such a product may cause GI side effects, such as nausea, diarrhea, and constipation, as well as headache and breath odor. If they don't experience a relief of symptoms, patients should be referred to their health care provider for prescription options to treat their anxiety.

References:

https://pubmed.ncbi.nlm.nih.gov/17381051/
https://naturalmedicines.therapeuticresearch.com/databases/food,-herbs-supplements/professional.aspx?productid=838#mechanismOfAction
https://naturalmedicines.therapeuticresearch.com/databases/food,-herbs-supplements/professional.aspx?productid=838#dosing
https://pubmed.ncbi.nlm.nih.gov/31655395/
http://online.lexi.com.ezproxy.lib.utah.edu/lexi/dose/dosecalc/dosecalcpro/0852877?seide1kEFadmMZBx&searchUrl=%2Fp%2Faction%2Fsearch%3Fq%3Danxiety%26%3Dname%26ua%3Danxiety
http://online.lexi.com.ezproxy.lib.utah.edu/lexicomp/doc/retrieve/doc/lfc_mc2/3750287?seid=5wRGhGapY4E&searchUrl=%2Fpo%2Faction%2Fsearch%3Fq%3Dlavender%26%3Dname%26ua%3Dlavender#history-nested
https://www-nature-com.ezproxy.lib.utah.edu/articles/s41598-019-54529-9