

FROM TRADITION TO INNOVATION: A POLYHERBAL NASAL OIL FOR RAPID MIGRAINE MANAGEMENT***Shruti Shingade, Divya Tambe**

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ABSTRACT

Migraine is a chronic neurological disorder characterized by recurrent, severe headaches often accompanied by nausea, photophobia, and phonophobia. Conventional therapies, although effective, are associated with limitations such as adverse effects and variable efficacy, leading to increased interest in alternative treatments, particularly herbal formulations. In the present study, a polyherbal nasal oil was developed using Feverfew, Ginger, Peppermint, and Ashwagandha incorporated into a sesame oil base. These herbs are known for their analgesic, anti-inflammatory, and neuroprotective properties. The intranasal route was selected to enable rapid absorption through the highly vascularized nasal mucosa, facilitating direct delivery to the brain while bypassing gastrointestinal metabolism. This approach is inspired by the Ayurvedic Nasya therapy. The formulation was evaluated for

physicochemical parameters, including pH, viscosity, clarity, and microbial safety, along with in vitro anti-inflammatory activity. Results indicated that the formulation is stable and exhibits potential therapeutic effects. Overall, the polyherbal nasal oil shows promise as a natural alternative for migraine management, though further in vivo and clinical studies are required.

KEYWORDS: Migraine; Polyherbal formulation; Nasal drug delivery; Nasya therapy; Anti-inflammatory activity; Neuroprotection.

INTRODUCTION

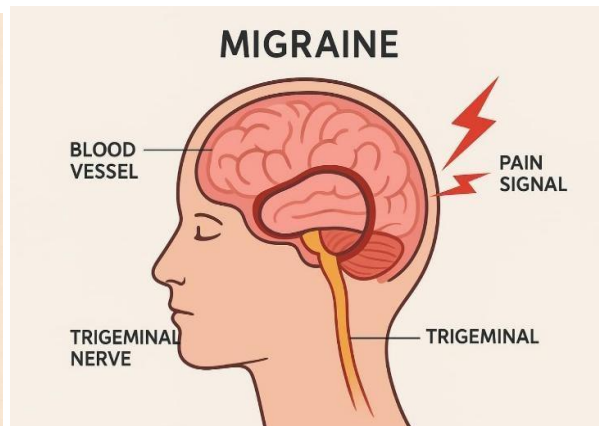
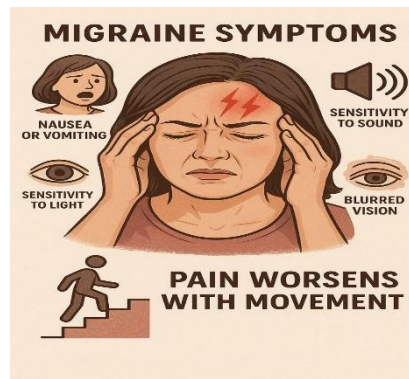
migraine is a type of headache that is very painful and can disturb daily activities like studying, working, and sleeping. even though many medicines are available, they do not give fast relief to everyone, and some people experience side effects. because of this, researchers are exploring safer and quicker treatment options ayurveda uses a method called nasya, where medicated oil is given through the nose to treat problems related to the head. modern science now agrees that the nasal route can work very fast because the nose has a rich blood supply and can send medicines quickly to the brain polyherbal nasal oil is made using several medicinal plants that work together to reduce pain and inflammation. studies suggest that these herbs may help control migraine symptoms more effectively. this review explains how combining traditional ayurvedic knowledge with modern science can create a fast-acting and innovative option for managing migraine.

METHODS

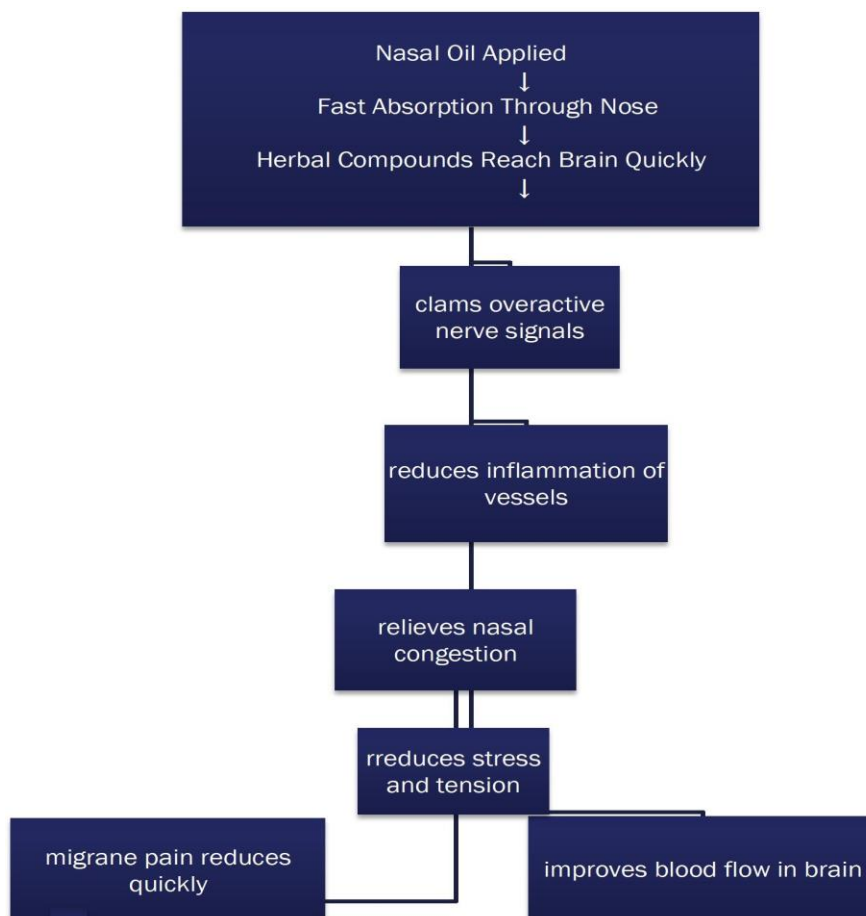
A polyherbal formulation was developed using Feverfew, Ginger, Peppermint, and Ashwagandha incorporated into a sesame oil base. The intranasal route was selected to enhance drug delivery due to its rapid absorption through the nasal mucosa and potential direct access to the central nervous system. The formulation was evaluated for physicochemical parameters, including pH, viscosity, clarity, and microbial safety. Additionally, in vitro studies were conducted to assess its anti-inflammatory activity.

Symptoms

- ✓ Severe, throbbing headache — usually on one side of the head.
- ✓ Nausea or vomiting.
- ✓ Sensitivity to light (photophobia) and sound (phonophobia).
- ✓ Blurred vision or seeing spots.
- ✓ Pain worsens with movement, like walking or climbing stairs.
- ✓ Additional Symptoms
- ✓ Neck stiffness or pain.
- ✓ Dizziness or feeling light-headed.
- ✓ Aura (in some people) — flashing lights, zig-zag lines, or temporary vision loss before the headache starts.



CLINICAL FEATURES



Diagnosis: - 1. History Taking (What the patient tells): Headache features: Usually one-sided, throbbing/pulsating, moderate to severe. Duration: Lasts 4–72 hours.

Triggers: Stress, certain foods, hormonal changes, lack of sleep.

Associated symptoms: Nausea, vomiting, sensitivity to light (photophobia) and sound (phonophobia).

Aura (if present): Visual changes like flashes of light, zig-zag lines, or temporary numbness.

2. Physical Examination

Check vitals, neurological exam, and eyes to rule out other problems.

3. Diagnostic Criteria (Based on International Headache Society – IHS): At least 5 attacks with the following features.

1. Headache lasts 4–72 hours

2. Has at least two of these

3. At least one of these: Nausea and/or vomiting Sensitivity to light and sound

4. Investigations: Usually not needed if symptoms are typical. MRI or CT scan if there are red flag signs (sudden severe headache, neurological deficits, new symptoms after 50 years, etc.)

5. important for diagnosis:

Migraine is diagnosed mainly by patient history. Red flags are important to rule out serious causes. Aura is not always present, but helps in diagnosis.

RESULTS

The developed nasal oil formulation demonstrated acceptable physicochemical properties and was found to be stable and free from microbial contamination. In vitro evaluation indicated notable anti-inflammatory activity, suggesting its potential role in alleviating migraine-related inflammation.

CONCLUSION

The polyherbal nasal oil formulation demonstrates potential as a natural and effective approach for the management of migraine, owing to its combined anti-inflammatory and neuroprotective properties. The use of the intranasal route may enhance therapeutic outcomes by enabling rapid drug delivery to the brain. Nevertheless, comprehensive in vivo studies and well-designed clinical trials are essential to confirm its efficacy, safety, and suitability for long-term use.

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