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Review of Neer Peenisa Nasikabbaranam in the Management of Neer Peenisam

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KEYWORDS

Siddha medicine, nasal insufflation, Nasikabbaranam, sinusitis

ABSTRACT:

The Siddha medical system is widely recognised for its efficaciousness in treating a wide range of ailments. The Siddha system of medicine contains an array of internal and external medications. Naasikabbaranam is one among them. External medicines are as important as internal medicine in the management of diseases and general well-being. Sinusitis is a highly prevalent condition in clinical practice these days. Sinusitis is an inflammatory condition involving the four paired structures surrounding the nasal cavities. Nasikabbaranam (insufflation)is the process of inhaling substances. It used to treat mainly for the derangement of kabham etc., It has a faster action than oral route. This siddha poly herbal formulation mentioned in Agathiyar attavanai vagadam. The ingredients in siddha polyherbal formulation have anti-inflammatory, anti-histamine, anti-analgesic, anti-oxidant properties. In recent times, awareness of Siddha system among people for the management of various diseases were increased.There will be further in vivo and clinical trials carried out in the future to confirm the therapeutic advantages.

INTRODUCTION:

Siddhars classified diseases into 4448 categories. The Siddha philosophy states that the five elements of this universe—earth, water, fire, air, and space—also exist in the human body and combine to produce *Tridhoshas* or humours, such as *Vatham* (Air of Life), *Pitham* (Fire) and *Kapham* (water humour). Maintaining health requires these three humours remain in equilibrium. [1]

An infection of the paranasal sinuses known as sinusitis frequently exacerbates upper respiratory tract illness. Environmental allergens, irritants, bacterial and fungal infections, and dental problems that induce inflammation or infection are among the causes of sinusitis.[2] According to estimates, sinusitis affects between 1 and 3% of upper respiratory infections. Children experience 6–8 episodes of upper respiratory infections per year, compared to around 2-3 episodes for adults.[3]

Purulent nasal secretions, sinus tenderness on palpation, mucosal erythema, increased pharyngeal secretions, and periorbital oedema are clinical signs of both acute and chronic sinusitis. Nowadays, corticosteroids or allergy tablets along with nasal sinus irrigation are used to treat sinusitis.[4] The process of inserting dry nasal powder into the nostril is known as *Nasikabbaranam.* Nose powder and nasal snuff are some other names for it.[5] There are 86 disorders with nasal origins. One of these diseases is *peenisam*, and *Neer peenisam* is one of nine classifications for this condition.

According to Siddha literature, Peenisam is also known as *Mookadaippu* or *Neerkovai*. Yugi Vaithya Chinthamani lists the signs and symptoms of *Neer peenisam*, which include headache, lacrimation, nasal

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block, itching in the nose, ear discharge, runny nose, coughing up expectoration, and loss of taste. The triggering factors for this disease include drinking cold water, being cold, breathing in smoke, offensive and harmful gases, speaking loudly, insomnia, taking a bath in contaminated water, suppressing 14 natural urges (especially crying and vomiting), and improper yoga practises that raise body temperature.[6] The ingredients in siddha polyherbal formulation have anti-inflammatory, anti-histamine, anti-analgesic, anti-oxidant properties. The siddha poly herbal formulation mentioned in *Agathiyar attavanai vagadam*. This review describes the chemical constituents and pharmacological activity of the part of each ingredient used in this formulation.

MATERIALS AND METHODS:

Trial drug: *Neer peenisa nasikabbaranam*

PREPARATION OF THE TRIAL DRUG

Ingredients:

Fruits of *Strychnos potatorum* - *Thaetran*

Rhizomes of *Curcuma aromatica* - *Manjal*

Fruits of *Piper longum* - *Thippili*

Phytochemical and pharmacological studies of above drugs are mentioned in Table:1

METHOD OF PREPARATION

All the above ingredients are grinded and the powder is snuffed into the nostrils.

PHARMACOLOGICAL STUDIES

Anti-inflammatory activity of Strychnos potatorum

Anti-inflammatory activity was determined by SPP and SPE of Strychnos potatorum Linn. In models of carrageenin-induced hind paw oedema and cotton pellet granuloma, seeds were studied. The increasing amounts of lipid peroxide, acid phosphatases, and alkaline were all found to be normalised by SPP and SPE, demonstrating their respective capacities for free radical scavenging and membrane stabilisation.[6]

Anti-analgesic activity of Strychnos potatorum

Analgesic activity was determined by aqueous and ethanol effect of Strychnos potatorum Linn.In models of abino mice were placed on Eddy's hot plate maintained at a constant temperature 55 ± 1o C to produce thermal induced pain.The extarcts were injected intraperitoneally and note the reaction time at 0,1,2 and 4 hours. As a result, compared to the standard medication, the aqueous extract's analgesic action is prolonged. [7]

Anti- Inflammatory activity of Curcuma aromatica

Models used in this study was arachidonic acid induced ear inflammations in mice, ethanol extracts and formulations showed a strong anti-inflammatory effect. It was proposed that the anti-inflammatory action that resulted was caused by impacts on several mediators and the cyclo-oxygenase pathway, which is involved in the metabolism of arachidonic acid.[8]

Antioxidant activity of Curcuma aromatica

Antioxidant activity was determined by using 2,2diphenyl-1-picrylhydrazyl (DPPH) radical-scavenging test, the essential oils of C. aromatica rhizomes from 12 different areas in China were evaluated for their antioxidative activities.[9]

Antioxidant activity was determined by chemical composition and antioxidative activity of both essential oil and organic extracts of *C. aromatica* leaves. The methanol extract (IC50 = 16.58 µg/ml) and the essential oil extract (IC50 = 14.45 µg/ml) both exhibited more antioxidative activity than the reference chemical, butylated hydroxyanisole, which had an IC50 value of 18.27 µg/ml. The antioxidant properties were evaluated by DPPH and superoxide radical-scavenging assays. [10]

Antihistaminic activity of Piper longum

Antihistaminic activity was determined by fruits of *Piper longum.*Guinea pig is used for the study. In this study, the histamine-induced contraction of the isolated guinea pig ileum preparation was greatly decreased by petroleum ether, alcohol, and decoction extracts of piper longum fruits. This suggests that the plant has H1 receptor antagonistic activity and supports its antihistaminic properties.[11]

Anti-analgesic activity of Piper longum

Analgesic effect of piperine was studied by hexane and ethanol extracts of P. nigrum L. was investigated using eddy's hot plate method. The test exhibited a notable central analgesic effect, as evidenced by a noteworthy increase in reaction time. The pure compound piperine demonstrated maximum activity at a

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dose of 10 mg/kg after 120 minutes by increasing the reaction time (increase threshold potential of pain), which may be related to the inhibition of prostaglandin synthesis. The hexane and ethanol extracts of P. nigrum L. do not have any analgesic properties at any dose.[12]

DISCUSSION:

Nasikkabaranam (Nasal insuffulation) is one of the external therapies in the Siddha system of medicine. The nasal mucosa present in nose has been considered as a potential administration route to achieve faster and higher level of drug absorption. It is an ideal alternative to the parenteral for systemic drug delivery. Hydrophobic and low molecular drugs can easily penetrate through nasal mucosa with less degradation and fast absorption can be achieved due to large surface area, high vascularization and low enzymatic environment of nasal cavity. The olfactory region is capable of delivering the drugs directly to the brain by avoiding the blood brain barrier. Hence nasal route appears to be a promising route for the delivery of drugs to brain.

CONCLUSION:

It has been observed that despite the widespread use of antibiotics in biomedicine, the proportion of people with sinusitis is rapidly increasing. All herbs reviewed in this article are used in the treatment of sinusitis. Among all the herbs studied, has Anti-inflammatory, Anti-histaminic, Anti-oxidant activity. For further research, external treatment *Nasikkabaranam*, should be clinically assessed for treating sinusitis. The treatment should be available in general practice to improve predictions and enhance evidence-based medicine in external treatments.

Table no.1 INFORMATION ABOUT THE INGREDIENTS

S.NO	BOTANICAL NAME	TAMIL NAME	PARTS USED	ACTION	PHYTO CHEMICALS	PHARMACOLOGICAL STUDIES
1	*Strychnos potatorum*	Thaetran	Fruit	Emetic, antidysentric	Alkaloid, flavonoids, lignins,glycosides,phenols,saponins,sterols,and tannins	Antimicrobial activity,Anti-inflammatory activity,Antidiarrhoeal activity,Hepatoprotective activity[13]
2	*Curcuma aromatica*	Kasthuri manjal	Rhizome	Tonic, Stimulant, carminative	alkaloids flavonoids,curcuminoids, tannins, and terpenoids.	antimicrobial, antioxidant, anti-inflammatory, anticancer activity [14]
3	*Piper longum*	Thippili	Fruit	stimulant, carminative	Alkaloids,volatile oils,lignans,esters[11]	Analgesic,anti-inflammatory activity[12]

REFERENCE:

1. Saranya, R. Parallel Analysis of *Kabaala Iya Azhal* in Siddha Literature with Sinusitis. *Int. J. Ayurveda Pharma Res.* **2017**, *5* (11), 1-8.
2. Parvathy, P. A Siddha Literature Review on Parallel Analysis of *Netriculai Vatam* with Frontal Sinusitis. *Int. J. Ayurveda Pharma Res.* **2022**, *10* (6), 12-19.
3. Isselbacher, K. J.; Braunwald, E.; Wilson, J. D.; Martin, J. B.; Fauci, A. S.; Kasper, D. L. *Harrison's Principles of Internal Medicine*, 13th ed.; McGraw-Hill: United States of America, 1994; pp 516-517.
4. Slavin, R. G.; Spector, S. L.; Nathan, R. A.; Smart, B. A.; Vandewalker, M. L. The Diagnosis and Management of Sinusitis: A Practice Parameter Update. *J. Allergy Clin. Immunol.* **2005**, *116* (6), S13-S47.
5. Thirunarayanan, T.; Sudha, R. *External Therapies of Siddha Medicine*; Centre for Traditional Research and Medicine: Chennai, 2010.
6. Sanmuga, E. P.; Enkataraman, S. Anti-inflammatory Effect of *Strychnos potatorum* Seeds on Acute and Subacute Inflammation in Experimental Rat Models. *Pharma Biol.* **2007**, *45*, 435-439.
7. Mallikharjuna, P. B.; Gouda, T. S.; Seetharam, Y. N. Analgesic and Anti-inflammatory Activities of

Strychnos Potatorum L.F. Seed Extracts. *Pharmacologyonline* **2010**, *2*, 876-882.

8. Kumar, A.; Chomwal, R.; Kumar, P.; Sawal, R. Anti-inflammatory and Wound Healing Activity of *Curcuma aromatica* Salsb. Extract and Its Formulation. *J. Chem. Pharm. Res.* **2009**, *1* (1), 304-310.
9. Xiang, H.; Zhang, L.; Yang, Z.; Chen, F.; Zheng, X.; Liu, X. Chemical Compositions, Antioxidative, Antimicrobial, Anti-inflammatory and Antitumor Activities of *Curcuma aromatica* Salsb. Essential Oils. *Ind. Crops Prod.* **2017**, *108*, 6-16.
10. Al-Reza, S. M.; Rahman, A.; Sattar, M. A.; Rahman, M. O.; Fida, H. M. Essential Oil Composition and Antioxidant Activities of *Curcuma aromatica* Salsb. *Food Chem. Toxicol.* **2010**, *48*, 1757-1760. doi: 10.1016/j.fct.2010.04.008.
11. Kaushik, D.; Rani, R.; Kaushik, P.; Sacher, D.; Yadav, J. In Vitro and In Vivo Antiasthmatic Activity of the Plant *Piper longum* Linn. *Int. J. Pharmacol.* **2012**, *8* (3), 192-197.
12. Tasleem, F.; Azhar, I.; Ali, S. N.; Perveen, S.; Mahmood, Z. A. Analgesic and Anti-inflammatory Activities of *Piper nigrum* L. *Asian Pac. J. Trop. Med.* **2014**, *7* (Suppl 1), S461-S468.
13. Singh, M. K.; Sharwan, G.; Iyer, S. K.; Khare, G.; Tripathi, D. K. Botany, Ethnomedicinal, Pharmacological and Therapeutic Applications of *Strychnos Potatorum* Linn: A Review. *Am. J. PharmTech Res.* **2012**, *2* (1), 1-10.
14. Umar, N. M.; Parumasivam, T.; Aminu, N.; Toh, S. M. Phytochemical and Pharmacological Properties of *Curcuma aromatica* Salsb (Wild Turmeric). *J. Appl. Pharm. Sci.* **2020**, *10* (10), 180-194.