

**ROLE OF AYURVEDA IN TREATMENT OF SINUSITIS- A REVIEW****Dr. Mamta Rana\***

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**ABSTRACT**

Sinusitis is the condition of inflamed or swollen tissues lining of the sinuses. Normally, sinuses are filled with air, but when sinuses become blocked and filled with fluid, germs (bacteria, viruses, and fungi) can grow and cause inflammation. Sinusitis causes irritation or swelling of the tissue covering the sinuses. Healthy sinuses are loaded with air. But there are times when they get blocked and loaded with fluid. In such cases, germs can develop and cause an infection. Due to this infection, your nose gets heavily blocked along with your sinuses and might make it difficult for you to breathe. Ayurveda deals these cases with some Ayurvedic formulations along with sweatana (steam) and dhoopan karma. Hence an attempt has been made to recollect the role of Ayurveda in management of sinusitis.

**KEYWORDS:** turmeric, curcumin, neem, dhoopan.**INTRODUCTION**

Ayurveda is that which deals with good, bad, happy and unhappy life, its promoters and non-promoters, measurement and nature. Sinusitis is known as peenas in Ayurveda. It can affect people of any age and sex. The common conditions that cause sinus blockage include the common cold, allergic rhinitis (swelling of the lining of the nose), nasal polyps (small growths in the lining of the nose), or a deviated septum (a shift in the nasal cavity).<sup>[1-2]</sup>

**TYPES OF SINUSITIS**

- **ACUTE SINUSITIS** — a sudden onset of symptoms such as runny, stuffy nose and facial pain that does not go away after 10 to 14 days. Acute sinusitis can last up to 4 weeks.

- **SUB-ACUTE SINUSITIS** — an inflammation lasting 4 to 8 weeks.
- **CHRONIC SINUSITIS** —sinus inflammation symptoms lasting 8 weeks or longer.
- **RECURRENT SINUSITIS** — several attacks within a year.

#### **SIGN AND SYMPTOMS OF SINUSITIS:**

1. Common cold.
2. Allergic rhinitis (swelling of the lining around the nose).
3. Little developments or growths in the covering of the nose called nasal polyps.
4. A deviated septum (a shift in the nasal cavity).
5. Difficulty in breathing due to blockage of one or both nostrils.
6. Headache — mild to intense or heaviness at the front of the head.
7. Radiating pain in the ears, upper jaw and teeth.
8. Feverish.
9. Swelling around eyes and cheeks.
10. Bad breath.
11. Ear blockages.
12. Cough.
13. Thick mucus discharge.

#### **CAUSES OF SINUSITIS**

- Increased intake of dry, oily, spicy foods that are too hot or too cold; foods that are heavy and hard to digest, poor food combinations
- Impaired kapha (water element) accumulates in the sinuses and blocks the flow of vata (air)
- Impaired pitta (fire) causes swelling and irritation of the tissues of the sinuses
- Exposure to cold or dusty and dry weather
- Staying awake till late in the night and sleeping in the daytime
- Repeated respiratory infections
- Deviated nasal septum
- Nasal polyps
- Dust or pollen allergies
- Infections in the mouth can be caused by tooth decay
- Impaired immune system

## OTHER FACTORS

1. Causes of Sinusitis (Sinus Infection)
2. Viral/bacterial infection – Infection (bacterial or viral) can cause mucous membranes to swell up and become inflamed and thus blocking the drainage of fluid from the sinuses into the nose and throat. This buildup of fluid and mucus causes pressure and pain of sinuses.
3. Allergic rhinitis – Allergies can lead to recurrent common colds with inflammation and trigger sinusitis.
4. Deviated septum – Some people have deviated nasal septum which can block the nasal passage and leads to sinusitis.
5. Nasal polyps – Nasal polyps are tissue growths inside the nose which block the sinuses and are a cause of sinusitis.
6. Risk Factors related to Sinusitis
  - i)- Asthama
  - ii)- Abnormality of nasal passage
  - iii)- Immune system issues
  - iv)- Exposure to pollutants
  - v)- Asprin sensitivity
7. Asthma – There is a strong connection between asthma and sinusitis.
8. Abnormality of nasal passages – Deviated or crooked septum greatly increases the risk of sinusitis.
9. Immune system issues – Certain immunity problems can result in augmented risk.
10. Exposure to pollutants – Exposure to smoke, such as from cigarettes, can result in sinus issues.
11. Aspirin sensitivity – Sensitivity to aspirin is associated with respiratory symptoms and thus increases the risk of sinusitis.

## AYURVEDIC MANAGEMENT OF SINUSITIS

In Ayurveda, acute sinusitis is due to aggravated kapha and vata in the region above the clavicle (*collar bone*). Treatment modalities involve ayurvedic detoxification (panchakarma), external therapies, internal medications, and diet and lifestyle modifications. External therapies including nasya, dhoopan etc. internal include vaman virechana etc.

There are some natural therapies which help in relieving these symptoms are

1. Stay Hydrated: Drink a lot of water, soup or broth, along with juices with no added sugar and hot tea. These liquids will disperse bodily fluids and drain it from the disturbed sinuses.
2. Salt Water Rinse: In case you suffer from sinus infections often, invest in a neti pot. This helpful container makes it simple to hydrate your nasal tract, getting out undesirable bodily fluids and any contaminants you may have breathed, a may have been caught in the nasal cavity.
3. Turmeric/Ginger Root: Turmeric root is an excellent fragrant spice found in most Indian and Middle Eastern dishes. Turmeric not only contains the regular calming and anti-inflammatory curcumin, it is also an antioxidant. When it is mixed with hot ginger ale and blended with hot tea, this mixture can remove excess fluid from the clogged nasal sections, ease sinus pressure and make you feel better.
4. Spicy Food: Spicy ingredients such as mustard, hot peppers, curry, and masala in one's food may help in clearing sinuses. In case you like spices, think about including some hot flavours to your food to open your nasal entries.
5. Apply Warm Packs: You can use a warm pack to keep the nasal tissues damp. Also, fill a round bowl or pot with steaming water and place your face over it with a towel around your head to inhale the steam in. This will open up your sinuses and make an easy path for fluid drainage.
6. Take a Steam: High temperature water vapour can saturate the sinuses. Sprinkle a couple drops of eucalyptus or menthol in the shower or bath and steam up your bathroom. A hot shower can also relax the bodily fluid as well as the mucus and debris that are stuck inside your nose.
7. Apple Cider Vinegar: Apple cider vinegar is not only powerful in disposing off sinus issues; it can also be used for different skin and hair issues. What it does essentially for sinus infection is that it clears up the nose so that the bodily fluid can be removed quickly.

## DHOOPAN KARMA

Ayurveda embraces a holistic approach with its gist lying in curing the disease and promoting health of an individual. Ayurveda believes in striking a balance between an individual (body, mind, soul, spirit) and environment. Measures like water purification, Homa, Yagnya, Dhoopana have been mentioned in our Ayurvedic texts. Dhoopana is a method by which drugs of herbal, herbo-mineral or animal origin are used for fumigation so as to heal Vrana,

Yonivyapada, Karna Rogas, Nasa Rogas, GudaRogas, GatraDaurgandhya; to disinfect Bheshajagara, Vranagara, Sutikagara, Shastrakar-maghruha, Kumaragara and also to sterilise Asavas and Aristas. Dhoopana is an integral part of Rak-shavidhi, which ensures protection against microbes. Dhoopana of plants has also been mentioned for treating Arsha, Jwara, Unmada, Romantika and Shotha etc. Different formulations for Dhoopana have been mentioned by Acharya Charaka, Sushruta and Vagbhata. In the current review, an attempt has been made to compile all such references of Dhoopana Dravyas referred in Brihatray. Dhoopana has also been mentioned for its antimicrobial and in sinusitis there is microbial growth in sinuses that leads to inflammation of sinuses. Dhoopana has broad spectrum of aesthetic, spiritual, psychological and medical significance. Probable mode of action: It dilates blood vessels and helps in oxidation of blood. It leads to adequate tissue perfusion and oxygenation. Thus, reduces inflammation, itching and eliminates infection.<sup>[3-5]</sup>

Neem also has been used quite often as one of the major ingredients in most of the formulations. Azadirachtin in the Neem seed oil is a proven chemical for its insecticidal properties. In a study, *Staphylococcus aureus* showed high level of inhibition of 100% in 10 min and 50% in 5 min to the fumes of *Azadiractaindica* showed maximum of 90% inhibition rate. This natural fumigant not only kills pests but also affects them negatively by acting as feeding and oviposition de- Sahara Shrestha: Dhoopana Karma: Some other formulations have added fragrant substances like Chandana, Ela etc. This may have been done to mask the obnoxious smell of some other pungent drugs and to provide a soothing effect on the brain and help in restoring mental and spiritual balance.<sup>[6-9]</sup>

#### Use of turmeric( Curcumin ) in sinusitis

Curcumin is the principal ingredient in turmeric whose bright yellow-orange colour comes due to the presence of fat-soluble, polyphenolic pigments, called the curcuminoids. Two other curcuminoids termed bisdemethoxycurcumin and demethoxycurcumin are also present in turmeric and provide additional nutrient support to it.

Turmeric is mostly found in the South and South-East Asia and curcumin is obtained from the dried rhizome (root) of the turmeric plant. Ideally, the rhizome is processed to form turmeric that contains 2% – 5% curcumin.

Sinuses are hollow air spaces within the bones surrounding the nose. When they are healthy, they are filled with air and produce mucus, which drains into the nose. When they become blocked, they get filled with fluid and they get infected leading to sinusitis.

## DISCUSSION

Acute – It is a temporary infection associated with a cold. It can then turn into a bacterial infection. Acute sinusitis can last up to four weeks.

Subacute – Subacute sinus inflammation usually lasts up to four to twelve weeks.

Chronic – When sinusitis lasts for more than 12 weeks, it is called chronic sinusitis.

Recurrent – If someone has several attacks of sinusitis in a year, it is called recurrent sinusitis.

Regular episodes of Acute sinusitis lead to developing Chronic sinusitis.

It helps with the healing of the sinus cavity and clears the airways. Most of the times, sinus infections are caused by inflammation of the mucous membranes. Since turmeric possesses anti-inflammatory properties, it is considered a highly effective solution for the sinus infection.

### Remedies for a Sinus Infection

Washing hands often helps in decreasing the incidences of infections.

Nasal congestion and stuffiness should be treated promptly to avoid buildup of fluids and development of sinusitis.

Avoiding allergens which trigger allergy attacks is extremely helpful.

Breathing dry air can aggravate nasal congestion and use of humidifiers increase the moisture in the air.

### Natural Remedies for Sinus Infection

Apart from taking care of general hygiene, here are a few things you can do to aid the condition of Sinusitis.

1. Use a humidifier.
2. Breathe in steam vapours.
3. Use a warm, wet towel on your face to take off some of the pressure.
4. Try a nasal saline (saltwater) solution.
5. Flush out your sinuses using bulb syringes or Neti pots.
6. Drink lots of fluids
7. Rest. Get plenty of sleep and give your body a chance to recover
8. Opt for curcumin supplements

## Investigations

Physical Exam — Tenderness and pain on the face, around the nose, would be noted on physical exam.

Imaging — CT scan or MRI of the sinuses might be needed to check for inflammation or obstruction if any.

Endoscopy – Nasal endoscopy might be needed using an endoscope in order to observe inside of sinuses.

Allergy testing – Allergy skin testing might be done to check for any allergies that might be exacerbating symptoms of sinusitis.

Culture – If sinusitis is not responding to treatment culture might be ordered to check for the causing organism such as bacteria or fungi.

## Benefits of Turmeric or Curcumin in Sinusitis

It is a well-known fact that turmeric is being used in Ayurveda for a variety of diseases. Modern science has indeed confirmed that all these benefits of turmeric can be attributed to the presence of Curcumin.

Like citrus fruits are the source of vitamin C, turmeric is known to be the source of Curcumin. Curcumin is a highly potent compound but its absorption through turmeric is not very easy.

Curcumin (Turmeric) is a known ingredient across the globe and its multiple health benefits (achieved when it gets combined with piperine, thereby increasing its bioavailability) further make it a significant part of Indian culinary.

Typically a turmeric root contains about 3-5% of Curcumin and thus taking non-standardized powdered turmeric root would entail intake of a very large amount in order to derive any benefit. Many other herbal drugs like neem, sonth, gugglu can be given in form of dhoopan (fumigation ) to remove the bacteria, viruses from sinus region.<sup>[10-11]</sup>

## CONCLUSION

There are various medications and formulations available in market but use of single drug in form of dhoopan along with shaman medications can give us benefit. Hence we can treat such ailments using herbal formulations containing above drugs.

**REFERENCES**

1. Utthamaraayan K.S. Siddhar Aruvai maruthuvam, Chennai; Department of Indian medicine and Homoeopathy, 4th edition, 2005; Pg 40, 181, 184.
2. Murugesu mudhaliyar K.S. Gunapadam Mooligai vaguppu, Chennai; Department of Indian medicine & Homoeopathy, 1st edition, 1936; Pg 64,143,214,350,422, 473,721,743,824.
3. Ramachandran S.P. Agathiyar ayurvedham 1200, Chennai;Thaamarai pathippagam,1st edition, Oct 1999; Pg 9,179,180,181,182,210.
4. Pon.Gurusironmani, Aanaivaari R. Aananthan, Chennai; Siddha Toxicology Department of Indian medicine and Homoeopathy, 1st edition, 1999; Pg 192.
5. Dr.Thirunarayanan External therapies of Siddha Medicines, Chennai; Central for Traditional Medicines & Research Chennai, 1st edition, 2010.
6. Senthil vel. G. Ph.D, Jayavenkatesh.J. Ph.D. A Complete Manual on Siddha External Therapies, 1st edition 2017, Madurai; Shynlax Publications, Pg 106,107.
7. Thiagarajan R. Siddha Sirappu maruthuvam, Chennai; Department of Indian medicine & Homoeopathy, 1st edition 2009. Pg 77 to 82, 297, 569.
8. Anantkumar V, Shekokar, Kanchan M Borkar. To Study the Efficacy of Ayurvedic Dhoopana for Operation Theater Sterilization. International Journal of Advanced Ayurveda, Yoga, Unani, Siddha and Homeopathy, 2013; 2(1): 143-147.
9. Shastri L, Yogratnakara, VidyotiniTika, Uttarardh; Yonivyapadachikitsa 5. Varanasi: Chaukhamba Prakashana, Reprint Edition, 2013; 409.
10. Jogani V, Jinturkar K, Vyas T, Misra A. Recent patents review on intranasal administration for CNS drug delivery. Recent Patents on Drug Delivery and Formulation, 2008; 2: 25-40.
11. Meltzer EO. The role of nasal corticosteroids in the treatment of rhinitis. Immunology and Allergy Clin cs of North America, 2011; 31: 545-560.