

# Management of Chronic sinusitis through Siddha Treatment - A Case Report

## Case Report

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### Abstract

Inflammation of one or more of the paranasal sinuses is called sinusitis. Sinusitis is classified 4 types based on symptoms persist. Bacterial or fungal infections are common causes for Chronic sinusitis One of the eight Indian peoples are affected by chronic sinusitis. According to siddha literature sinusitis is correlated with the symptoms of Peenisam, which is also called mukkataippu. 08/03/2022 a 27- year male patient attend our Muthu Siddha Hospital Seranmahadevi with the complaints of cold, rhinitis, nasal congestion, sneezing at every morning, itching present in both nasal cavity, pain present in nearby both maxillary region since last one month. A patient had a previous history of Chronic sinusitis. Symptoms are significantly reduced were observed under the siddha medicines such as a combination of siddha Sastric chooranam (*Thalisathi chooranam, Palagarai parpam, Pavala parpam, Muthucippi parpam*), *Vasanthakusamakaram* tablet for internal and *Chukku Thailam* is used for external use in oil bath. No recurrence of any chronic sinusitis clinical features like sneezing, nasal congestion and pain was observed during the five months of follow-up of siddha intervention done. To conclude this case report showed siddha medicines are very effective in the treatment of chronic sinusitis.

**Key Words:** Case report, *Siddha, Peenisam, Chronic Sinusitis, Thalisathi chooranam, Chukku thailam.*

### Introduction

Inflammation of one or more of the paranasal sinuses is called sinusitis. Sinusitis is classified 4 types based on symptoms persist. when symptoms persist within 4 weeks called Acute, symptoms persist within four to eight weeks is called Subacute, symptoms persist more than eight weeks called Chronic sinusitis. Recurrent sinusitis includes of three or more episodes of acute sinusitis per year (1).

Bacterial or fungal infections are common causes for Chronic sinusitis. Persistent nasal congestion, sinus pressure and increased severity are chronic bacterial infections' symptoms. chronic fungal sinusitis patients have nasal polyp, asthma, presents as pan sinusitis and thick, eosinophil- laden mucus with the consistency of peanut butter (2). More than 1 in 5 antibiotics prescribed in adults are for sinusitis, making it the fifth most common diagnosis responsible for antibiotic therapy (3). In China 8%, in Europe 11 %, in Korea 8.4 % and in the United States 12% of peoples are affected by chronic sinusitis (4). More than 134 million Indian peoples are affected from chronic sinusitis and its prevalence is higher than diabetes, asthma, or coronary heart disease. One of the eight Indian peoples are

affected by chronic sinusitis (5). Nasal congestion or obstruction, facial or dental pain, purulent rhinorrhea, post-nasal drainage, headache, and cough, sneezing are the symptoms of chronic sinusitis and additional signs associated with include fever, severe pain, fatigue, hyposmia, ear fullness, or pressure (6). Siddha system of medicine is one of the traditional medicine for AYUSH system of medicines in India. According to siddha literature sinusitis is correlated with the symptoms of *Peenisam*, which is also called mukkataippu (7). Both Internal and external therapies are prescribed for Chronic sinusitis. Herein the details of chronic sinusitis case study have been presented, which is successively treatment with siddha sastric medications. This case study observed, clinical features slightly reduced in two weeks of siddha treatment and completely recovered from 45 days of treatment. Present case study showed siddha medicines are very effective in chronic sinusitis patients.

### Patient Information

08/03/2022 a 27- year male patient attend our Muthu Siddha Hospital Seranmahadevi, Tirunelveli, Tamil Nadu, India with the complaints of cold, rhinitis, nasal congestion, sneezing at every morning, itching present in both nasal cavity, pain present in nearby both maxillary region since last one month. Before 2 years patient had sneezing, rhinitis, nasal congestion, migraine, watery eyes for more than 2 weeks. Then patient visited nearby ENT hospital and ENT doctor examined the patient and advised to do Computed Tomography (CT) paranasal sinuses. CT paranasal sinuses study showed deviation of nasal septum to the

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left side, Hypertrophy of left interior turbinate and Mucosal thickening seen in bilateral maxillary sinuses. After that study report doctor prescribed for antibiotics and antihistamines for one week. After taking these medications symptoms were reduced. For the past two years same symptoms were reoccurred and worsened. Every time patient had taken allopathic medication. After this, Patient came to Muthu Siddha Hospital Seranmahadevi for further treatment for sinusitis. Patient occupation is event organizer for last 3 years.

### Clinical findings

The patient had cold, rhinitis, nasal congestion, sneezing at every morning, itching present in both nasal cavity, pain present in nearby both nasals in last one month. On examination pain present in frontal and maxillary sinuses area. patient had no comorbidities. patient had previous history of dust allergy. patient had no previous history of wheezing, Bronchial asthma. Patient's vital are within normal limits.

### Timeline

Table 1 represents the timeline of the occurrence of events in the present case study. It represents all the symptoms along with the previous treatment taken by the patient and the results are obtained.

### Diagnostic findings

Sinusitis is correlated with *Peenisam* in International Standard Terminologies on Siddha Medicine published by World Health Organization. As per siddha literature, general characteristics of *Peenisam* (Sinusitis) are *thummal* (Sneezing), *Mookku nheer paaithal* (rhinitis), *Mookil erichalum arippum untaathal* (itching and burning sensation present in nasal cavity), *Kannheer vadithal* (Watery Eyes), *mukkataippu* (Nasal Blockage), *Kaathadaiththal* (Ear fullness), *Mookai adaithhaar poal pesaseithal* (Hoarseness of voice), *Naasi vali* (Facial pain/pressure), *thalai noathal* (Headache), *Mookilirunthu seezh*, *Sali, kuruthi veliyathal* (watery nose, occasionally pus and blood discharge) and *Moochu vida siramam* (Difficult in breathing) (7). Present clinical features of patients in Cold (*Iyam*), rhinitis (*Mookku nheer paaithal*), nasal congestion (*Mukkataippu*), sneezing at every morning (*Thummal*), itching present in both nasal cavity (*Naasi azharchi*), pain present in nearby both nasals (*Naasinothal*) in last one month.

The patient was already diagnosed with nasal septal deviation on the left side, maxillary sinusitis by ENT doctor. Biomarkers in before treatment Immunoglobulin E (IgE) and Erythrocyte Sedimentation Rate (ESR) levels are increased (IgE-250Iu/mL, ESR- 56 mm/hr.). It represents table 2. Sino-Nasal Outcome test (Snot-22) scale was used for assessment in before and after treatment. It represents table 3 and table 4. In before treatment Snot-22 score was 19.

Subjective Parameters:

- Sneezing
- Nasal block
- Running nose

Objective parameters:

- Rhinitis
- Nasal Congestion
- Sneezing
- Nasal Pain
- Itching present in both nasal cavity
- CT report
- Blood Investigations: CBC, ESR, Hb, Liver function test, Renal function test, Random Blood Sugar, IgE
- Snot-22 scale

In Siddha: *Naadi- Piththakabam*, *Naa-* Normal, *Niram-* Normal, *Sparisam-* affected (itching present in both nasal cavity, pain present in nearby both nasals), *Mozhi-* Affected (Mild hoarseness voice), *Vizhi-* affected (Sometimes watery eyes present), *Malam-* normal, *Moothiram-* Normal, *Thaegi- Vathapitham*.

In the management of sinusitis, according to siddha literature, following sastric internal and external medicines are prescribed.

### Internal medicines:

*Chooranam:* *Thalisathi chooranam*, *Thirikidugu chooranam*, *Senthil chooranam*, *Athimathura chooranam*. *Parpam:* *Pavala parpam*, *Palagarai parpam*, *Thaalaga parpam*, *Muthucippi parpam*, *muthu parpam*. *Chenduram:* *Thaalaga chenduram*, *linga chenduram*, *Gowrichinthamani chenduram*, *Poorana santhodaya chenduram*, *Sayakulanthaga Chenduram*. *Maaathirai:* *Vasanthakusamakaram*, *bramanandha bairavam*, *mahavasanth kusamakaram*. External medicines: *Chukku thailam*, *peenisa thailam*, *arakku thailam* and *notchi thailam*. *This sastric siddha medicines are made from herbs, metals, minerals and Herbo metal mineral formulations (7).*

*The following Siddha Sastric medicines were selected for this case study in accordance with the guidelines prescribed by the siddha medicines for Peenisam (Sinusitis).*

### Treatment Schedule

The patient was administered through following Siddha intervention. It represents table 2.

A combination of chooranam is a four unique siddha Sastric medicines which includes *Thalisathi chooranam* (100gm), *Palagarai parpam* (10gm), *Pavala parpam*(10gm), *Muthucippi parpam* (10gm). Combination chooranam 1 gm twice a day after a meal with honey. *Vasanthakusamakaram* Tablet 2 tablets (100 mg each) twice a day after a meal with honey. *Chukku Thailam* is used for external use in oil bath for weekly twice a day.

Patient was advised to visit the hospital once in 15 days and during each visit, clinical assessments and prognosis was noted.

### Outcomes and follow-up:

During this siddha intervention, patient taken these medications were completed without any complications and no ADR reported. In each visit, prognosis and symptoms are noted. In before treatment,

patient had a previous history of chronic sinusitis and sneezing at every morning, cold, rhinitis, nasal congestion and pain present in nearby both nasals clinical features are noted. After 15 days of treatment, sneezing, cold, rhinitis clinical features are mild reduced and nasal congestion is completely reduced. After 45 days of treatment, itching present in both nasal cavity, pain present in nearby both nasals and other clinical features completely recovered. After competition treatment Snot-22 total score was reduced from 19 (Before treatment) to 01. In last visit, patient is advised to apply *Chukku thailam* external use for oil bath in weekly twice a day. In next 4 months' follow-up patient had no clinical features of chronic sinusitis.

## Discussion

In recent publication of WHO international standard terminologies on Siddha medicine published by WHO, Sinusitis is correlated with *peenisam* (Term id: ISMT-4.14.18). Due to derangement of *azal* there is nasal blockage, inflammation of nasal mucosa and sinuses resulting in sneezing, watery eyes, heaviness of head, headache, running nose, bloody and purulent discharge with phlegm while blowing nose; classified in nine types: 1. sinusitis due to *vali* (*valimukkataippu*); 2. sinusitis due to *azal* (*azal mukkataippu*); 3. sinusitis due to *aiyam* (*aiyam mukkataippu*); 4. sinusitis with throat pain and inflammation (*kazuttu mukkataippu*); 5. sinusitis with epistaxis due to excessive heat (*kuruti mukkataippu*); 6. sinusitis with nasal polyp (*mulai mukkataippu*); 7. suppurative sinusitis (*ciz mukkataippu*); 8. allergic rhinitis (*nir mukkataippu*); 9. suppurative nasal septal disease (*ciray mukkataippu*). Both internal and external medicines are prescribed for sinusitis in siddha literature (8). According to European Position paper on Rhino sinusitis and Nasal polyp's recommendations 2017 & Joint Task Force on practice parameters recommendations, Intranasal corticosteroids, Oral corticosteroids, Antibiotics, Antihistamines and Topical decongestants are recommended for treatment of chronic rhino sinusitis (9).

Above therapeutic regimens are combination of Siddha Sastric medicines. *Thalisathi chooranam* is a classical siddha polyherbal formulation and it indicates to treat 96 types of *Kabam* diseases, cold, cough, fever, *peenisam*, gastritis, sore throat, tuberculosis and urinary tract infections (10). *Thalisathi chooranam* has Bronchodilator, Anti-inflammatory, Immuno modulatory, Anti pyretic activity, anti-microbial activities and suresh k et al study showed *Thalisathi chooranam* was safe and very effective to treat in respiratory diseases (11). Musthafamufasa et al study showed *thalisathi chooranam* has expectorant, tonic, carminative, stimulant, diuretic properties (12). *Palagarai parpam* is a herbomineral siddha formulation and it indicates to treat cough, sinusitis, bronchial asthma, tuberculosis, fever, eye diseases and gastritis (13). *Palagarai parpam* has anti-spasmodic, anti-histaminic (14), Antipyretic, anti - inflammatory, anti - microbial activity, Anti-

inflammatory activity, Cardiac activity, Analgesic properties (15), Hepatoprotective and Antioxidant properties (16). *Pavala parpam* is a classical siddha herbomineral formulation and it indicates to treat Cough, Bronchial asthma, Tuberculosis, Gastic ulcer, Liver diseases, Headache, Fever and pitha diseases (13a). *Pavala parpam* has Anti-bacterial and anti-histaminic (17), anti-microbial activity (18), Anti-atherosclerotic activity, Haemostatic Activity, Hepatoprotective Activity and Anti-osteoporotic properties (19).

*Muthucippi parpam* is a sasthric siddha herbomineral formulation and it indicates to treat respiratory diseases (13b). *Muthucippi parpam* has Antimicrobial activity, Antioxidant activity, Antiulcer activity, Anti osteoporotic and anti -inflammatory properties (20). *Vasanthakusamakaram* Tablet is a herbometalic preparation and it indicates to treat sneezing, fever, bronchial asthma, flatulence, urinary tract infections (10a). Above siddha therapeutic regimens has promising antibacterial, antihistaminic, anti-inflammatory, bronchodilator, anti - microbial, antioxidant properties and very effective in respiratory diseases. According to siddha literature, vitiated piththam and kabam are the main cause for chronic sinusitis. External application oil bath is very effective way to normalized for piththam and kabam. *Chukku thailam* is a siddha herbal medicine. Patient advised to weekly twice a day *chukka thailam* oil bath and patient advised to avoid sweets, milk products, watery vegetables like radish, snake gourd, zucchini, cucumber, watermelon and avoid dust exposure. Patient advised to Thirumoolar pranayamam (Breathing exercise) in early morning and evening time.

According to this case report, after siddha intervention notable changes in reduced sneezing, rhinitis, itching, nasal congestion and pain. After 45 days of Siddha Treatment Ig E levels reduced from 250IU/mL to 60 IU/mL and ESR level reduced from 56 mm/hr to 15 mm/hr. Previous studies showed comparing the levels of ESR, total and specific IgE with the severity of sinusitis. Total IgE was useful in diagnosing allergic rhinitis, particularly at levels higher than 100 IU/mL. Observed that total IgE levels were higher in individuals with allergic rhinitis than in those with non-allergic rhinitis, in a retrospective study (21). SNOT-22 is considered one of the most robust CRS-specific PROMs and recommended for routine clinical evaluation and clinical trials (22). SNOT - 22 scale was used to assessment of symptom severity, social and emotional impact, productivity and sleep consequences of Chronic Rhinosinusitis Patients (23). SNOT- 22 total score 8-20 represents mild, more than 20 to 50 represents moderate and more than 50 represents severe condition (24). Snot-22 total score decreased from 19 (Before treatment) to 01 after competition treatment. No recurrence of any chronic sinusitis clinical features like sneezing, nasal congestion and pain was observed during the five months of follow-up of siddha intervention done.

## Conclusion

This case report showed siddha medicines are very effective in the treatment of Chronic sinusitis. Additionally, further study should be done with large sample to reveal efficacy of siddha treatment for chronic sinusitis.

## Patient Perspective

The patient-I had a sneezing, running nose, itching and pain in nose, nasal block for last one moths. But I had same symptoms in last 2 years in occasionally. Then I came Muthu siddha hospital and doctor advised to take siddha medicines for next 2 months. After 2 weeks of the treatment, the symptoms

slightly reduced and I feel better. I continued my medicines for until I got recovered.

## Informed Consent

Written permission for publication of this case study was obtained from the patient.

## Acknowledgements

I express my sincere thanks to Muthu siddha hospital for kindly appreciate and encourage in every step of this case report.

## Conflict of Interest:

Declared None.

## Timeline

**Table 1: represents the timeline of the occurrence of events in the present case study. It represents all the symptoms along with the previous treatment taken by the patient and the results obtained.**

Timeline	
2020	Sneezing, rhinitis, nasal congestion, migraine, watery eyes for more than 2 weeks. Take allopathy medication for one week.
2021 January	Sneezing, running nose and pain in both nasal cavities. Take allopathy medication for one week then patient take Levocetirizine (5.0 Mg) + Montelukast (10.0 Mg) at night after food for when symptoms are present.
2021 April	Sneezing at every morning, itching in both nasal cavities, Redness of eyes present. Patient had no medications. Symptoms are worsened then patient visit near allopathy hospital and take medications until symptoms recovered.
2021 August	All above symptoms are repeated and patient take Levocetirizine (5.0 Mg) + Montelukast (10.0 Mg) tablet at night after food. Symptoms slightly reduced.
08/03/2022	The patient came to Muthu Siddha Hospital Seranmahadevi with the complaints of cold, rhinitis, nasal congestion, sneezing at every morning, itching present in both nasal cavity, pain present in nearby both nasals in last one month.

After 45 days of treatment patient completely recovered from all clinical features and biomarkers are reduced significantly. So, we are giving 45 days line of treatment and follow-up in every 15 days in next 4 to 5 months. We ensure in these 4 to 5 months follow-up visit patient had no recurrence of any chronic sinusitis clinical features.

**Table 2: Biomarkers in Before Treatment and After Treatment**

Biomarkers	Before Treatment	After Treatment
Hemoglobin	14.9 g/dl	14.1 g/dl
Packed cell volume	44.7%	42.3%
RBC Count:	4.6 Milli/cu.mm	4.7 Milli/cu.mm
Mean corpuscular volume	91.3 Fl	89.9Fl
Mean corpuscular hemoglobin	30.4 pg	30pg
Mean corpuscular hemoglobin concentration	34.7 g/Dl	33.3 g/Dl
Platelet count	2.6 lacks	2.45 lacks
Total WBC count	7800 cells/cu.mm	8100 cells/cu.mm
ESR	56 mm/hr	15 mm/hr
Neutrophils	51%	69%
Lymphocytes	41%	26%
Eosinophils	3%	2%
Monocytes	5%	3%
Basophils	0%	0%
Serum Ig E	250 IU/mL	60 IU/mL
Blood Sugar ®	112 mg/dl	107 mg/dl
Urea	29.1 mg/dl	27.3 mg/dl
Creatinine	1.0 mg/dl	0.9 mg/dl
Uric acid	4.7 mg/dl	4.9 mg/dl
T. Bilirubin	0.7 mg/dl	0.6 mg/dl
D. bilirubin	0.1 mg/dl	0.1 mg/dl
In. Bilirubin	0.6 mg/dl	0.5 mg/dl
SGOT	17.1 IU/L	16.6 IU/L



SGPT	16.5 IU/L	15.5 IU/L
ALP	92.4 IU/L	98.4 IU/L
T. Protein	6.4 gm/dl	6.8 gm/dl
Albumin	4.3 gm/dl	4.4 gm/dl
Globulin	2.1 gm/dl	2.4 gm/dl

**Table 3: Assessment of Sino-Nasal Outcome Test (Snot-22) in Before Treatment**

1. Considering how severe the problem is when you experience it and how often it happens, please rate each item below on how "bad" it is by circling the number that corresponds with how you feel using this scale: □	No Problem	Very Mild Problem	Mild or slight Problem	Moderate Problem	Severe Problem	Problem as bad as it can be	5 Most Important Items
1. Need to blow nose	0	1	2	3	4	5	<input type="checkbox"/>
2. Nasal Blockage	0	1	2	3	4	5	<input checked="" type="checkbox"/>
3. Sneezing	0	1	2	3	4	5	<input checked="" type="checkbox"/>
4. Runny nose	0	1	2	3	4	5	<input checked="" type="checkbox"/>
5. Cough	0	1	2	3	4	5	<input type="checkbox"/>
6. Post-nasal discharge	0	1	2	3	4	5	<input type="checkbox"/>
7. Thick nasal discharge	0	1	2	3	4	5	<input type="checkbox"/>
8. Ear fullness	0	1	2	3	4	5	<input type="checkbox"/>
9. Dizziness	0	1	2	3	4	5	<input type="checkbox"/>
10. Ear pain	0	1	2	3	4	5	<input type="checkbox"/>
11. Facial pain/pressure	0	1	2	3	4	5	<input checked="" type="checkbox"/>
12. Decreased Sense of Smell/Taste	0	1	2	3	4	5	<input type="checkbox"/>
13. Difficulty falling asleep	0	1	2	3	4	5	<input type="checkbox"/>
14. Wake up at night	0	1	2	3	4	5	<input type="checkbox"/>
15. Lack of a good night's sleep	0	1	2	3	4	5	<input type="checkbox"/>
16. Wake up tired	0	1	2	3	4	5	<input type="checkbox"/>
17. Fatigue	0	1	2	3	4	5	<input type="checkbox"/>
18. Reduced productivity	0	1	2	3	4	5	<input type="checkbox"/>
19. Reduced concentration	0	1	2	3	4	5	<input type="checkbox"/>
20. Frustrated/restless/irritable	0	1	2	3	4	5	<input checked="" type="checkbox"/>
21. Sad	0	1	2	3	4	5	<input type="checkbox"/>
22. Embarrassed	0	1	2	3	4	5	<input type="checkbox"/>
	0	4	8	3	4	<b>Total: 19</b>	

**Table 4: Assessment of Sino-Nasal Outcome Test (Snot-22) in After Treatment**

1. Considering how severe the problem is when you experience it and how often it happens, please rate each item below on how "bad" it is by circling the number that corresponds with how you feel using this scale: □	No Problem	Very Mild Problem	Mild or slight Problem	Moderate Problem	Severe Problem	Problem as bad as it can be	5 Most Important Items
1. Need to blow nose	0	1	2	3	4	5	○
2. Nasal Blockage	0	1	2	3	4	5	○
3. Sneezing	0	1	2	3	4	5	○
4. Runny nose	0	1	2	3	4	5	○
5. Cough	0	1	2	3	4	5	○
6. Post-nasal discharge	0	1	2	3	4	5	○
7. Thick nasal discharge	0	1	2	3	4	5	○
8. Ear fullness	0	1	2	3	4	5	○
9. Dizziness	0	1	2	3	4	5	○
10. Ear pain	0	1	2	3	4	5	○
11. Facial pain/pressure	0	1	2	3	4	5	○
12. Decreased Sense of Smell/Taste	0	1	2	3	4	5	○
13. Difficulty falling asleep	0	1	2	3	4	5	○
14. Wake up at night	0	1	2	3	4	5	○
15. Lack of a good night's sleep	0	1	2	3	4	5	○
16. Wake up tired	0	①	2	3	4	5	○
17. Fatigue	0	1	2	3	4	5	○
18. Reduced productivity	0	1	2	3	4	5	○
19. Reduced concentration	0	1	2	3	4	5	○
20. Frustrated/restless/irritable	0	1	2	3	4	5	○
21. Sad	0	1	2	3	4	5	○
22. Embarrassed	0	1	2	3	4	5	○
	0	1	0	0	0	0	<b>Total: 01</b>

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