INTRODUCTION

Tundikeri is a condition mentioned in the Ayurveda Bruhatrayee, clinical features of which resembles tonsillitis. It is a very common condition occurring frequently up to the age of fifteen but age is no bar to it. Both the sex is affected equally. Incidences go up to 7% of all visits to pediatricians. Tonsillitis is inflammation of the palatine tonsils which is one of the most common infections of the throat encountered in everyday practice1. It may occur as a primary infection of tonsils itself or can be secondary to a pre existing upper respiratory tract infection or a pre existing chronic tonsillitis predisposing with poor orodental hygiene, lowered immunity and poor nutrition. The general exogenous causes include ingestion of cold drinks or foods, contagion, pollution, ill ventilated and overly crowded environment2. The condition usually presents with raw or sore throat, pain that aggravates on swallowing, pain referring to the ears,
muffled voice, enlarged and painful jugulodigastric nodes. Constitutional symptoms like malaise, fever, headache and tachycardia is usually associated. The disease is usually managed with analgesics and topical regimen additionally with antibiotics when of bacterial origin. This gives desired therapeutic result initially but fails to arrest a recurrent infection against predisposing and precipitating factors rendering the disease progress towards chronicity. Inability to manage recurrent infections progresses the disease to chronicity making it justifiable for surgical removal. Tonsils are termed the policeman of the throat meant to fight against the initial invading infections preventing its entry into the body further. Complete removal of tonsilar tissue will thus render the human body more prone to infectious conditions and a compromised immune response. Thus usually conservative management is preferred over surgery in all instances other than in its absolute indication. Chronic tonsillitis may produce effects on distant organs of body acting as a septic focus due to bacteraemia and may even aggravate rheumatism, subacute bacterial endocarditis and acute nephritis with other complications such as quinsy, retropharyngeal abscess and acute otitis media. In Ayurveda Tundikeri is treated by the use of shamanoushadhi and sthanika upachara such as kavala graham and pratisarana based on doshic predominance. Shastra karma is indicated in instances only where shamana chikitsa fails. Pratisarana of suitable oushadha dravya is one of the preferred management to check the disease progress of tundikeri. Currently in practice teekshna kshara pratisarana is followed which has its own drawbacks of being accidentally ingested by the patient, or being applied over healthy mucosa and demands the need of cautious application.

Lime is an alkaline product which when applied over human skin has the capability of creating mild irritation to full thickness burns. It is this corroding property that can be intelligently used to achieve therapeutic benefits. Hydrated lime is proved to kill bacteria and germs and hence is chosen in many processes of sterilization and purification. Sudha or lime possesses all the kshara guna with a desired potency which in case of tonsillitis proves to be a better choice than the actual kshara to overcome untoward effects. Pratisaraneeya kshara karma is a prevalent treatment modality in Ayurveda which has been advocated in disorders like arbuda, adhimansa and many other disorders with undesirable growth of body tissues. Kshara with its properties like chedana, bhedana and lekhana so serves the purpose of cutting and scraping that can be achieved without the use of a shastra. Hence considering all the above factors pratisarana of a kshareeya dravya can be an effective solution in the management of tundikeri w.s.r. to chronic tonsillitis which is being showcased through this case report.

**CASE REPORT**

A 26 year old female presented with complaints of sore throat, pain during swallowing, heaviness in voice and bad breath since 5days. A detailed history elicited recurrent attacks of the same since a year with an interval of three to four months between two episodes. Patient also complained of slight raise in body temperature, malaise and pain in her ears initially on the onset of symptoms.

**ON EXAMINATION**

On examination patient was febrile and oral examination revealed inflamed bilateral palatine tonsils that appeared swollen, red in color associated with mild congestion of the uvula. Enlarged and tender tonsilar lymph nodes and halitosis were also evident. Routine hematological investigation revealed raised polymorph and erythrocyte sedimentation rates.

**HISTORY OF PRESENT ILLNESS**

Patient gave a history of being treated for an upper respiratory tract infection a week before the onset of tonsillitis and its symptoms initially. She procured her initial medical care for tonsilitis from a local clinic after which her symptoms subsided. 3months later she again suffered from same complaints for which she got treated again. Both the times she was treated with antibiotics, analgesics along with topical gargles after which she was relieved off her problem within a week of medication. 4months later patient again developed the same complaints for which she approached us for further management.
MATERIALS AND METHODS

1) INGREDIENTS:
   a) Guda
   b) Sudha

Method of preparation: Guda and sudha were taken in the ratio 5:1. Guda was heated along with sufficient quantity of water on moderate fire until it gained the consistency of single tantu paka. Once guda obtains single tantu paka, sudha (lime) was mixed and stirred thoroughly for about 2-3 minutes. Change in the colour of mixture from yellowish to reddish orange was also appreciated. The entire mixture was then removed off heat and stirred again. Care was taken regarding the consistency of the paka so that easy pratisarana can be achieved.

The medicament must be prepared fresh for every sitting gradually increasing the quantity of sudha by 1 part observing the teekshnata in previous sitting.

PROCEDURE

Poorva Karma:
1) Complete information about the procedure being adopted and its duration was explained to the patient. A written consent was obtained.
2) Patient was advised to be either nil orally or to consume food 4 hours before the procedure.
3) Warm water gargle was advised just prior the procedure.
4) Patient was made to sit comfortably with head tilted backwards facing the source of illumination
5) A tongue depressor was then applied over the dorsum of posterior 1/3rd of the tongue.
6) A sterile cotton swab held with long artery forceps was gently rubbed over the tonsils
7) Patient was advised not to immediately swallow the medicament on application and to observe any sensations felt.

Pradhana Karma
1) Freshly prepared, swanga sheeta sudha guda paka was taken over tissue sampling swab and was applied thoroughly over the inflamed tonsils of one side
2) Tongue depressor removed and mouth closed, the patient was asked to observe for tingling sensation over the area
3) A minute after the reduction of tingling sensation the same procedure was done to the opposite tonsil too.
4) Three applications to each side was done on every sitting
5) The same procedure was carried out daily for a period of 7 days

Paschat Karma
1) Patient was advised to avoid exposure to cold environment
2) Patient was also advised with diet regimen

OTHER MEDICATIONS ADVISED
1. Patient was advised for kavala with sukoshna triphala kashaya twice a day during the procedure
2. Sudarshana Ghana vati, one tablet thrice a day was advised.

FOLLOW UP
1. Patient was advised initially for a general follow up after 2 weeks of treatment or on recurrence of any symptoms
2. Two other follow up was advised 3 months and 6 months after the treatment.

OBSERVATION
Patient observed a sense of mild tingling sensation within few seconds of application of sudha paka which subsided within a minute on the first day. Pain on deglutition, sore throat, halitosis persisted. The second and third day patient observed mild burning sensation along with tingling sensation after the application of medicament. On the 4th day patient was completely relieved off sore throat, pain on deglutition and was afebrile. Moderate reduction in the size of the inflamed tonsils was seen on the 4th and 5th day with remarkable reduction in size and absence of halitosis by 6th and 7th day of treatment.

During the 1st follow up patient’s general condition was fair with no signs and symptoms. The second and third follow up after three and six months had also rendered patient symptom free with no recurrences.
RESULT: Pain on deglutition, sore throat and halitosis were assessed subjectively

<table>
<thead>
<tr>
<th>Rx</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain on deglutition</td>
<td>VAS-8</td>
<td>VAS-5</td>
<td>VAS-2</td>
<td>VAS-0</td>
<td>VAS-0</td>
<td>VAS-0</td>
<td>VAS-0</td>
</tr>
<tr>
<td>Sore throat</td>
<td>Persisted</td>
<td>Persisted</td>
<td>Persisted</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>Halitosis</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Mild</td>
<td>Mild</td>
<td>Mild</td>
<td>Absent</td>
<td>Absent</td>
</tr>
</tbody>
</table>

Size of tonsils – Assessed according to Friedman Grading Scale

<table>
<thead>
<tr>
<th>Rx</th>
<th>Day1</th>
<th>Day2</th>
<th>Day3</th>
<th>Day4</th>
<th>Day5</th>
<th>Day6</th>
<th>Day7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Tonsils</td>
<td>Grade 3</td>
<td>Grade 3</td>
<td>Grade 3</td>
<td>Grade 2</td>
<td>Grade 2</td>
<td>Grade 1</td>
<td>Grade 1</td>
</tr>
</tbody>
</table>

DISCUSSION

Tonsils are muco-lymphoid tissues situated in oropharynx as a guard fighting the inhaled and ingested foreign pathogens thus prone to recurrent infections. Being the chief immunocompetent tissue they are easily prone to recurrent infections through both the nasal and oral route and become hypertrophic. In case of repeated recurrences the condition moves towards chronicity with hypertrophy of tonsilar tissue which can be considered as adhimamsa according to the quotation “ksharo arbuda adhimamseshu” by Acharya Charaka.

Lime is a calcium-containing inorganic mineral composed primarily of oxides, and hydroxide, usually calcium oxide and/ or calcium hydroxide. Burning (calcination) converts them into the highly caustic material quicklime (calcium oxide) and, through subsequent addition of water, into the less caustic (but still strongly alkaline) slaked lime or hydrated lime (calcium hydroxide, Ca(OH)₂).

Sudha being one amongst the khanijodbhava dravya of sudha varga has innate kshareeya guna in it. Being teekshna and vyavayi penetrates well into the substance of tonsillar tissue and with dahana guna causes cauterization of hypertrophied mass at a minute level. This in turn stimulates fibrosis of tonsillar tissue and reduces the size of tonsils. Thus causes therapeutic benefit by the action of inflammatory fibrosis.

According to Ayurveda Tundikeri is mainly caused due to vitiated kapha dosha. Kapha along with rakta causes shotha in Tundikeri. Acharya Sushrutha in the context of shotha chikitsa explains pratisarana of kshara and guda in kaphaja shotha. Pathology of tonsils is accompanied by hyperaemia and oedema with conversion of lymphoid follicles into small abscess which discharge into crypts. The pathology can thus be considered as kaphaja shotha and similar chikitsa be adopted. Pratisaraneeya kshara karma has been clinically proven to be an effective treatment in the management of unhealthy or undesirable growth of body tissues. Sudha, here being the active ingredient bestows desired therapeutic action and guda in tantu paka makes the consistency of medicament easier for application. It also allows the contact of medicament over the tonsilar tissue for a longer span of time. The medicine was applied directly on the inflamed tonsils and was seen that the symptoms and also size of inflamed tonsils reduced. It also checked the recurrence. Thus application of sudha and guda paka can be considered as an ideal non surgical procedure in the management of recurrent tonsillitis.

CONCLUSION

Nidana parivarjana and vyadhi pratyanika chikitsa adopted here lowered the symptoms by arresting the progress of pathology and also checked its recurrence effectively. Considering all the available treatment modalities for tonsillitis, pratisarana karma proves to be a better and convenient treatment option because of its easy adaptability, cost effectiveness, easy application and desired results. Sudha being a mrudu kshara along with guda has thus shown remarkable therapeutic benefits here in the case of recurrent tonsillitis by reducing both the vikrutha kapha and shotha.
REFERENCES


3. Textbook of Ear Nose and Throat Diseases by Mohammad Maqbool and Suhali Maqbool.11th ed.New Delhi;


6. Michael Friedman, Michelle Hwang” Brodsky and Friedman Scales and Clinical Tonsil Size Grading in Children”JAMA Otolaryngology Head and Neck Surgery, august 2018;[cited on 3rd February 2019]


Source of Support: Nil

Conflict Of Interest: None Declared