



Review Article

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ACUTE PHARYNGOTONSILLITIS AND ITS MANAGEMENT THROUGH SIDDHA: A REVIEW

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ABSTRACT

Pharyngotonsillitis is the inflammation of pharynx and tonsils characterized by sore throat and fever. Recurrent infections have adverse effects on normal growth and development of the child. It will hamper the quality of life for school going children. Tonsillitis is very common in pediatric practice. There are about 74,55,494 cases of Tonsillitis in India per year. Modern medicine provides symptomatic relief but does not prevent the recurrence and also cause some adverse effects. Moreover, chronic conditions are often treated by tonsillectomy which also shows some complications. So, there is a need to find out a safe and effective remedy which not only relieves the symptoms but also increases wellbeing. It can be traced by unsheathed treasure of Siddha. Tonsillitis can be correlated with virana silethumam in Siddha. This is caused by deranged kabam and raktha thathu due to improper diet, poor oral hygiene and sedentary lifestyle. Siddha literatures depicted various treatment modalities to cure diseases. This paper is an endeavor to highlight the clinical picture of virana silethumam and its management through Siddha.

Keywords: Pharyngotonsillitis, virana silethumam, Siddha, Lasunathabitha chooranam

INTRODUCTION

Pharyngotonsillitis is the inflammation of pharynx and tonsils characterized by sore throat and fever¹. This may be acute or chronic. It is a common upper respiratory tract infection in children and young people². Tonsillitis is caused by various bacteria and viruses and the most common infection is group A beta-haemolytic streptococcus (GABHS)³. Antibiotic therapy with penicillin is the first line of treatment for beta-haemolytic streptococcus⁴. The recurrent infection is common in children due to poor development of immune system. It will hamper the quality of life for school going children⁵. Apart from medical care with antibiotics, the only other alternative for recurrent infection is surgical removal. Antibiotics and Non-steroidal anti-inflammatory drugs (NSAID) cause gastrointestinal tract disruption, and surgical removal damages the immune system. About 2,00,000 tonsillectomies are performed in India per year⁶. Tonsillitis may result in various systemic complications like rheumatic fever, acute otitis media, peritonsillar abscess, parapharyngeal abscess, tonsilloliths, scarlet fever and acute glomerulonephritis⁷. Hence, the world is seeking for the management of tonsillitis in traditional medicine.

According to Siddha system of medicine, disease is caused by the vitiation and imbalance of three *doshams* (bodily humors), i.e., *Vatham*, *Pitham* and *Kabam*. There are 4448 diseases depicted in Siddha literatures⁸. A disease which is similar to tonsillitis in clinical presentation in Siddha is virana silethumam which is described under kaba noigal⁹. Siddha has ample treasure of herbal and herbo-mineral formulation in the form of oral and

local application which can be used in the management of tonsillitis. So, this study endeavors to explore the data about pharyngotonsillitis and drugs indicated for the management of tonsillitis.

OTHER NAMES OF TONSILLITIS IN SIDDHA

Annaakku thooru thabitham¹⁰, Lasuna thabitham, Ulnaaku azharsi, Thondai kola azharsi, Thondai azharsi, Thondai pun¹¹, Thondaikiranthi veekkam, Thondai novu, Thondai vegal, Thondai thooru¹², Thondaiyil valarum sadhai¹³, Thondai kattu, kala birundham, kala vanguram, kala chundi, kanda kiranthi, kanda santhu rogam, kanda salugam, kanda sundi¹⁴.

ETIOLOGY

Infectious agents

- *Beta-hemolytic streptococcus group A*
- *Beta-hemolytic streptococcus group C and group G*
- *Arcanobacterium hemolyticum*
- *Corynebacterium diphtheriae*
- *Spirochetes and fusiform bacteria*
- *Neisseria gonorrhoeae*
- *Mycoplasma pneumoniae*
- *Chlamydia pneumoniae*
- *Adenovirus*
- *Epstein-Barr virus*
- *Cytomegalovirus*
- *Rhinovirus*

- *Para influenza virus*
- *Respiratory syncytial virus*
- *Corona virus*
- *Herpes simplex virus*
- *Coxsackie A virus*
- *Influenza A and B viruses*
- *Human immunodeficiency virus.*¹

Diet regimen

- Fish
- Buffalo
- Pig's meat
- Raw radish
- Black gram
- Curd
- Milk
- Refrigerated items
- Cold beverages¹⁵

Causative factors

- Poor dental hygiene
- Sleeping in prone position
- Improper gargling and vomiting¹⁶

SIDDHA PATHOGENESIS

The Siddha system as well as unconventional medicine has accepted that diet regimen and lifestyle factors play an important role in pathogenesis of tonsillitis. This factor manifests derangement of kabam and raktham is preceded by impaired digestive capacity (Mandagni/Vishamagni). This causes the obstruction of gastrointestinal tract and respiratory tract, which is manifested as difficulty in swallowing, mouth breathing, choking spells at night, etc.¹⁷

CLINICAL DIAGNOSIS

Fever, sore throat, redness of the tonsils and pharynx, tonsillar exudate, enlarged and tender cervical lymph nodes, dysphagia and headache.¹⁸

LABORATORY DIAGNOSIS

The gold standard laboratory diagnosis of streptococcal pharyngotonsillitis is culture of throat swab. Culture of throat swab is a laboratory diagnostic test to evaluate the presence of a streptococcal infection in the throat¹⁹. Due to its long time, Rapid antigen detection test (RADT) can be an appropriate alternative test to identify group A streptococcus directly from throat swabs because it is a rapid test and takes few minutes in providing results as compared to throat swab culture. Complete blood count shows high neutrophils count. High C - Reactive Protein level indicates the inflammation²⁰.

SIDDHA FORMULATIONS INDICATED FOR TONSILLITIS

Many of the Siddha formulations are widely used for the management of tonsillitis. The ingredients present in the formulations are responsible for the therapeutic effect. So, the pharmacological activities of ingredients in recent studies were explored.

Internal medicines

Lasunathabitha chooranam: The ingredients of this formulation²¹ are pungam verppattai (*Pongamia pinnata*) and manjal (*Curcuma longa*). This decoction is useful in the management of tonsillitis. Gomathi studied the anti-inflammatory activity by hind paws method, anti pyretic activity by yeast induced method and analgesic activity by tail flick method²².

Thoothuvalayathi urundai: Thoothuvalai (*Solanum trilobatum*), Adhatodai (*Justicia adhatoda*) and Thippili (*Piper longum*) are the ingredients of this formulation²³. Thoothuvalai has Antioxidant and anti-inflammatory activities^{24,25}. Sharifi rad et al revealed the anti-inflammatory activity of *Justicia adhatoda*²⁶. The antipyretic activity of *Justicia adhatoda* was evaluated using Brewer's yeast-induced pyrexia method²⁷. Fegghi-Najafabadi et al reported the antioxidant activity of adhatoda through scavenging effect²⁸. Piper longum has the antibacterial²⁹ and immunomodulatory activity³⁰.

Kalluppu mathirai: Kalluppu (Common salt) should grind with Karisalai (*Eclipta prostrata*) juice and made as the tablets³¹. Kalluppu (Common salt) possesses the potent antimicrobial activity. Hence, it can be used as the preservative to prevent the contamination³². Kalluppu mathirai has the antimicrobial, antipyretic, analgesic and anti inflammatory activities³³.

Thalisathy chooranam: This is the herbal medicated powder¹⁷. Thalispatheri (*Abies webbiana*) is the major ingredient of chooranam. It exhibits anti-inflammatory, antiseptic, antispasmodic and diuretic properties³⁴.

Muthuchippi parpam: Dried oyster shells had an effective bacteriostasis. The aqueous extract of Muthuchippi parpam¹⁷ found to possess antioxidant and antimicrobial activities³⁵.

Thippili rasayanam: This is the herbal formulation¹⁷ with *Piper longum* as the major ingredient. It has antibacterial and immunomodulatory activity^{29,30}.

Saya chooranam: Kadukkai (*Terminalia chebula*), thippili (*Piper longum*), chitrarathai (*Alpinia galanga*), vaal milagu (*Piper cubeba*), jadhikkai (*Myristica fragrans*) are the ingredients of this formulation³⁶. Nowadays it is widely used for tonsillitis in clinical practice. The methanolic extract of *M. fragrans* had antibacterial property and strong inhibitory activity against *Streptococcus mutans*, which is an oral pathogen causing dental caries³⁷. *Piper cubeba* has antimicrobial, antiparasitic³⁸, anti inflammatory and antioxidant activities³⁹. Chitrarathai and kadukkai also possesses the antimicrobial and Anti-inflammatory activities^{40,41}.

Karpooravalli mathirai: Karpooravalli (*Coleus amboinicus*) is the major ingredient of this formulation⁴². It possesses antibacterial activity against Gram positive *Staphylococcus aureus*, Methicillin resistant *Staphylococcus aureus* and *Enterococci* and Gram-negative *Escherichia coli*, *Klebsiella pneumoniae*, *Citrobacter divergens*, *Shigella flexneri*, *Salmonella paratyphi A*, *Salmonella paratyphi B*, *Proteus mirabilis* and *Pseudomonas aeruginosa*⁴³. Karpooravalli mathirai has the antimicrobial, antipyretic, analgesic and anti inflammatory activities⁴⁴.

Aathondai kudineer: The ingredients of this formulation²¹ are Aadhondai pattai, murungai pattai (*Moringa oleifera*), sivanarvembu pattai (*Indigofera aspalathoides*), veppam pattai (*Azadirachta indica*), sangam verppattai (*Azima tetraacantha*) and purified vengaram. This decoction is useful in the management of

tonsillitis. Gomathi studied the anti-inflammatory activity by hind paws method, anti pyretic activity by yeast induced method and analgesic activity by tail flick method²².

External medicines

Poondu then: This is the herbal formulation made with garlic and honey. Garlic is alleged to have antimicrobial, antifungal and antiviral, immunomodulatory effects⁴⁵. Honey has the pharmacological activity of antioxidant, anti inflammatory and antimicrobial effects⁴⁶.

Vengara madhu: Vengara madhu is the combination of vengaram (borax) and then (honey). It can be used as the topical application¹⁰. Borax has antibacterial activity. Hence it is used in the medicated skin powders⁴⁷.

Chukku amukkara patru: Equal quantities of Chukku (*Zingiber officinale*) and amukkara (*Withania somnifera*) grind with milk and this mixture should be boiled with milk and applied on both sides of the throat³⁶.

Evacharam poochu: Evacharam and karchunnam should grind with the lemon juice and applied on the tonsils to prevent the growth of the tonsils⁴⁸.

Akkiragara koppuli kudineer: Gargle with the decoction of Akkiragaram (*Anacyclus pyrethrum*) root has the indication for tonsillitis⁴⁹.

Thiriphala koppuli kudineer: Gargle with the decoction¹⁷ of kadukkai (*Terminalia chebula* Retz), nellikai (*Emblica officinalis* Gaertn) and thandrikai (*Terminalia bellirica* Roxb) can reduce the inflammation of tonsils. Anti-microbial activity and anti-inflammatory activity of thiriphala are revealed⁵⁰.

CONCLUSION

Siddha possesses a huge treasure of herbal medicine which can be employed in the management of tonsillitis and can minimize necessity of antibiotic therapy and surgery. This formulation will pacify the deranged kabam and raktha thathu through inducing pitham. Efficacy and safety of these herbs is once again revalidated by various preclinical and clinical studies. These drugs will be the less toxic, safe and affordable.

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