CHRONIC TONSILLITIS IN CHILDREN: AN AYURVEDIC BIRD VIEW
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ABSTRACT
Chronic tonsillitis is a highly prevalent disease in paediatric age from 3-7 years of age. The recurrent attack of tonsillitis makes the disease chronic and vulnerable for infectious diseases. Tonsils and adenoids are the body’s first line of defence at the oro-pharyngeal gateway. It is estimated that 15% of all visits to family doctors are because of chronic tonsillitis. Ayurveda Acharyas have given detailed elaboration regarding the various etiological factors, prodromal symptoms, presenting features, various signs, prognosis and the various treatment modalities to be adopted in the treatment of chronic tonsillitis. In Ayurvedic per view, tonsillitis can be correlated to Tundikeri. Tundikeri is one among the Urdhva-jatragata roga; mentioned in Talugataroga (diseases of palate) as well as Kanthagaroga (diseases of throat). Present article is built on a detailed study of the chronic tonsillitis and Tundikeri along with an in-depth search in recent researches.
Keywords: chronic tonsillitis, tundikeri, talugata roga, kantagata roga

INTRODUCTION
Tonsils and adenoids are the body’s first line of defence at the oro-pharyngeal gateway. They “sample” bacteria and viruses that enter the body through the mouth or nose at the risk of their own infection. But at times, they become more of a liability than an asset and may even trigger airway obstruction or repeated bacterial infections.1 Tonsillitis refers to inflammation of the pharyngeal tonsils (glands at the back of the throat, visible through the mouth). The inflammation may involve other areas of the back of the throat, including the adenoids and the lingual tonsils (tonsil tissue at the back of the tongue). There are several variations of tonsillitis: acute, recurrent, and chronic tonsillitis, and peritonsillar abscess.2 It’s most common in children aged 3 to 7, who have larger tonsils than adults and older children.4 However, it is estimated that 15% of all visits to family doctors are because of chronic tonsillitis.3

Chronic tonsillitis
Chronic tonsillitis may be a complication of acute tonsillitis. Pathologically, micro abscesses walled off by fibrous tissue have been seen in the lymphoid follicles of the tonsils. There will be subclinical infections of tonsils without an acute attack. It mostly affects children and young adults.4

Subtypes of chronic tonsillitis 5
i) Chronic follicular tonsillitis: Here tonsillar crypts are full of infected cheesy material which shows on the surface as yellowish spots.
ii) Chronic parenchymatous tonsillitis: There is hyperplasia of lymphoid tissue. Tonsils are very much enlarged and may interfere with speech, deglutition and respiration.
iii) Chronic fibroid tonsillitis: Tonsils are small but infected, with history of repeated sore throats.

**Clinical features of chronic tonsillitis**

i) Recurrent attacks of sore throat or acute tonsillitis.

ii) Chronic irritation in throat with cough.

iii) Bad taste in mouth.

iv) Foul breath (halitosis) due to pus in crypts.

v) Thick speech (hoarseness of voice)

vi) Difficulty in swallowing.

vii) Choking spells at night (when tonsils are large and obstructive).

**Signs of chronic tonsillitis**

i) Tonsils may show varying degree of enlargement. Sometimes they meet in the midline (Chronic parenchymatous type).

ii) There may be yellowish beads of pus on the medial surface of tonsils (chronic follicular type).

iii) Tonsils are small but pressure on the anterior pillar expresses frank pus or cheesy material (Chronic fibroid type).

iv) Flushing of anterior pillars compared to the rest of the pharyngeal mucosa is an important sign of chronic tonsillar infection.

v) Enlargement of jugulodigastric lymph node is a reliable sign of chronic tonsillitis. During acute attacks, the nodes enlarge further and become tender.

**Chronic tonsillitis in Ayurveda**

The disease Tundikeri is highly prevalent disease but there is very less explanation in Ayurvedic classics regarding the description of disease and its management. The word Tundikeri is made up of two words i.e. Tundi and Keri. Tundi means mouth and Keri means location. So in total Tundikeri refers to the disease that occurs in the region of mouth. It is defined as “Tundikeri karpasyam vanakarpasi-phalm” which means Tundikeri resembles Vanakarpasi Phalam (cotton fruit). In Charaka Samhita there is no direct reference about Tundikeri. But it can be taken under the context of Ekadesheeya Shotha (localized swelling). In Sushruta Samhita and Astanga Hridya, the disease is characterized by Shoolashotha (hard swelling), Toda (pricking type of pain), Daha (burning sensation), Prapaki (tend to undergo suppuration) and Avarodha (creates obstruction in throat for respiration and deglutition). In Madhukosha commentary of Madhava Nidana, two types of Tundikeri are explained. This classification is based on Lakshana and Dosha predominance. Yogaratnakara considered Tundikeri as a much painful disease and added two types of pain in it - Shoola and Toda.

**Nidana (aetiological factors)**

Acharyas have not mentioned the specific causes for the manifestation of Tundikeri. But the common aetiology mentioned in the context of Mukharoga is applicable for Tundikeri as well. These aetologies can be divided into Aharaja-hetus (dietary causes) and Viharaja etus (causes related with regimens).

**Aharaja-hetus (dietary causes)**

The continuous usage of excessive fish, meat of buffalo, pork, uncooked ‘Mulaka’ (radish), soup of black gram, curd, milk, ‘Suktha’, sugar cane juice, ‘Phanitha’ is said to produce Mukhrogas (diseases of oral cavity) by vitiating Doshas, predominantly Kapha in the region of Mukha. Overall analysis of each Nidana with respect to Rasa, Guna, Veerya, Vipaka and Doshadusti is detailed in table 1.
Table 1: Showing analysis of various Nidana (aetiological factors) of Mukha Roga

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Aharas</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Dosha Dusti</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Matsya (fish)</td>
<td>Madhura (sweet)</td>
<td>Guru (heavy)</td>
<td>Ushna (hot)</td>
<td>Amla (sour)</td>
<td>Pitta and Kapha</td>
</tr>
<tr>
<td>2</td>
<td>Mahisha mamsa (meat of buffalo)</td>
<td>Madhura (sweet)</td>
<td>Guru (heavy), Snigdha (unctous)</td>
<td>Ushna (hot)</td>
<td>–</td>
<td>Kapha Rakta and Pitta</td>
</tr>
<tr>
<td>3</td>
<td>Masha (black gram)</td>
<td>Madhura (sweet)</td>
<td>Guru (heavy), Snigdha (unctous)</td>
<td>Ushna (hot)</td>
<td>–</td>
<td>Kapha – Pitta</td>
</tr>
<tr>
<td>4</td>
<td>Dadhi (curd)</td>
<td>Amla (sour)</td>
<td>Guru (heavy)</td>
<td>Ushna (hot)</td>
<td>Amla (sour)</td>
<td>Kapha, Pitta, Rakta &amp; Agni</td>
</tr>
<tr>
<td>5</td>
<td>Ksheera (milk)</td>
<td>Madhura (sweet)</td>
<td>Snigdha (unctous)</td>
<td>Ushna (hot)</td>
<td>Amla (sour)</td>
<td>Kapha</td>
</tr>
<tr>
<td>6</td>
<td>Ikshu rasa (sugarcane juice)</td>
<td>Madhura (sweet)</td>
<td>Snigdha (unctous), Guru (heavy)</td>
<td>Sheetha (cold)</td>
<td>Madhura (sweet)</td>
<td>Kapha</td>
</tr>
<tr>
<td>7</td>
<td>Phanitham</td>
<td>Amla (sour)</td>
<td>Guru (heavy)</td>
<td>Sheetha (cold)</td>
<td>Madhura (sweet)</td>
<td>Kapha</td>
</tr>
</tbody>
</table>

Viharaja-hetus (causes related with regimens)

Dantadhavana (brushing), Kavala (gargling) are measures to maintain the oral hygiene, avoidance of which leads to Kapha Dosha vitiation. Sleeping in prone position (Avaksayanam) creates hindrance to free flow of saliva leading to Mala Sanchaya hence Kapha Dosha vitiation. Taking bath daily after heavy diet, indigestion, drinking/bathing in cold water, excessive talking after eating, and suppression of natural urges aggravates Vata which in turn deranges Kapha thus congesting the channels of oral cavity.

Poorvaroopa (prodromal symptoms)

Tundikeri is a disease characterised by Shotha (inflammation) where the prodromal symptoms of Shotha can be taken in to consideration here; which includes localised increased temperature (Ushma) preceded by vascular congestion (Sirayana) where the Shotha is to occur.

Roopa (signs and symptoms)

According to Susruta, Tundikeri is characterized by large cystic swelling (Sthula Sopha) associated with prickling pain (Toda), burning sensation (Daha) and suppuration (Prapaka). Dosha involvement is as that of Galashundika i.e. ‘Kapha’ and ‘Rakta’. Vagbhata opines that ‘Tundikeri’ is the ‘Katina Sho- pha’ (hard swelling) that occurs in the region of Hanusandhi (temporomandibular region) resembling with the fruit of Kar- pasa (cotton plant). Vagbhata has given clear cut location of Tundikeri i.e. Hanusandhi which can be taken as faucial area. Sign and symptoms as explained by Vagbhata are more or less resembles with that of chronic tonsillitis.

Samprapti (Pathophysiology)

Due to indulging in above mentioned aetiological factors, Kapha dosha will get vitiated and thus vitiated doshas circulates in Siras and get localised in Mukha Pradeshha as urdhwanga is the prime seat of Kapha. Thus vitiated Kapha in association with other Doshas will result in the manifestation of Tundikeri.

Samprapti Ghatakas (components of pathophysiology)

Nidana : Kapha and Rakta Prakopaka
Ahara and Vihara
Dosha : Kapha, Rakta
Dushya : Rasa, Rakta, Mamsa
Srotas : Rasa, rakta and mamsavaha
Agni : Jataragni, Dhatwagni mandya
Srotodusti: Atipravritti and Sanga
Roga marga : Bahya
Udbhava sthana: Amashaya
Adhistana: Antarmukha

Types
Classification is based on predominance of Dosha and characteristic pain;
Vata-Pittaja – Tundikeri is associated with Toda and Daha
Kapha-Raktaja – Tundikeri associated with Sthoola Shotha, Trishna, Shwas and Kasa

Saadhyaasadyata (prognosis): Shastrasadhya vyadhī / Oushadhasadhya

Chikitsa (treatment): The management of Tundikeri is dealt in three ways - medical, para surgical and surgical management.

Medical management
Kashaya preparations: The Kashaya prepared out of Daruharidra, Nimba, Rasanjana, Indrayava should be taken with honey. Similarly Kashaya preparations such as Bharngyadi Kashaya, Dashamulakatutraya Kashaya, Indukantham Kashaya and Pathyakatphaladi Kashaya are also used.

Choorna preparation: Kalaka Choorna, Pitaka Choorna, Sudarsana Choorna, Talisapathadi Choorna, Triphala Choorna and Tridoshanashaka Yoga are specially indicated in chronic cases of tonsillitis.

Lehya preparation: Agastya Rasayana, Dashamulaharitaki Lehya and Madhusnuhi Rasayana are used.

Gutika/Vati preparation: Yavagrajadi Gutika, Kshara Gutika, Shiva Gutika, Khadiradi Vati, Jathyadi Gutika, Panchakola Gutika and Yavagrajadi Gutika are specially indicated

Bhasma preparation: Pravala Bhasma, Sphatika Bhasma and Tankana Bhasma are commonly used.

Taila preparation: Teeksha Nasya is indicated in with the Taila preparation of Devadra Phala Majja and faeces of horse. Virechana Nasya is also performed with Shatbindu Taila. Ghrita prepared with Sita, Tamalapatra and Maricha are also made use of in Nasya.

Rasa/Dhatu/Loha preparation: Amlapittantaka Rasa, Mahalaxmivilasa Rasa, Pravalapanchamruta Rasa and Savarna vasantha malati Rasa are indicated.

Para surgical management
The para surgical management of Tundikeri can be done with:
Raktamokshana: The classics have advised to perform Raktamokshana, at Upanasika Sira as there is predominance of Kapha and Rakta Dosh.

Kavala-Gandusha: Here the medicines are held in the oral cavity. Triphala, Trikatu, Yava kshara, Daruharidra, Chitraka rasanjana, Nimba, and Saptachadadi Gandusha Kashaya are made use of

Pratisarana: commonly used drug combinations in Pratisarana Karma include Pitaka Choorna with Pravala Bhasma, Tankana with Madhu, Sphatika with Madhu, Yavakshara with Kshoudram, Gruhadhooma with Shunti Choorna, Apamarga Kshara and Tankana Kshara.

Kshara Karma: Apamarga Kshara is widely used in cases of chronic tonsillitis.

Surgical management: Shastrakarma elaborated for Galashundi (Chedana) can be adopted in Tundikeri. Dalhana has classified Tundikeri under Bhedana Sadhyā Vyadhī. All Shastrakarma should be performed in three steps.

Poorvakarma: The patient is advised to perform Kavala-Gandoosha with Kashaya of Kaphanashaka Dravya. Then Pra-
tisarana is done with Sukshma Choorna of Kushtha, Maricha, Vacha, Saindhava Lavana, Pippali, Patha and Musta in equal quantity added with honey.

Pradhana karma: Tundikeri is gripped properly with Sandamsa Yantra and Chedana is done with Mandalagra Shastra at appropriate place.

Paschya karma: After Chedana, Pratisarana should be done with Pippali, Ativisha, Kushtha, Vacha, Maricha, Shunthi, Madhu and Saindhava Lavana. Su-shruta added Shyonyaka and Patha instead of Pippali and Shunthi of Yogaratnakara formulation for Pratisarana. Kavala with Kwatha of Vacha, Ativisha, Patha, Rasna, Katukarohini, and Nimba can also be done. Dhoomapanama with Dhoomavarti prepared out of Jantunashaka drugs like Ingudi, Apamarga, Danti, Trivrit and Devadaru. It should be used twice daily. The patient is advised to take Yusha prepared out of Mudga and Yavakshara.

Pathya in Tundikeri

According to Bhaishajya Ratnavali following are pathya: sudation (Swedanam), purgation (Virechanam), emetics (Vamanam), gargling (Gandoosham and Kavalam), local rubbing of medicine (Pratisarana), bloodletting (Asrasruthi), errhine therapy (Nasyam), inhalation of medicated smoke (Dhoomapana), surgical procedure (Sashtra karma), cauterisation (Agni-karma, Thrunadhanayam (a kind of cereal), Yava (Hordeum vulgare), Mudga (Phaseolus mungo), Kulathha (Dolichos biflorus), Jangala mamsa rasa (meat soup), Bahupatri, Karavela (Momordica charantiana), Patola (Trichosanthes dioica), Balamula (Sida coridfolia), Karpooraneeram, Tambula (Piper betle), Taptambu (boiled water), Khadira (Acacia catechu) and Ghrita (ghhee).

Apathya in Tundikeri

Teeth brushing (Dantakashtam), bathing (Snanam), sour taste (Amla rasa), fish (Matsya), Meat of animals residing in marshy land (Anupa mamsa), curd (Dadhi), milk (Ksheera), black gram (Masha), dry and hard food stuffs (Ruksha, Khatina anna), sleeping with head inclining down (Adhomukha shayana), substances which are hard to digest (Guru ahara), food stuffs causing obstruction of body channels (Abhisyandi) and sleeping during day (Divaswapna) should be avoided in Tundikeri.

DISCUSSION

The manifestation of symptoms and its severity depends on its extent of involvement of Dosha-Dushya Sammurcchana. The line of management starts with Nidana Parivarjana and consecutively Samprapti Vighatana. Factors like cold and rainy climatic conditions, dust, smoke, faulty food habits and daily regimens further aggravate the condition. Usage of bakery foods, junk foods worsens the symptoms. Though the disease is Kapha and Rakta predominant, there is involvement of Vata and Pitta Dosha in the Samprapti of Tundikeri. The clinical features of Tundikeri like Kathina Shotha, Toda, Paka and Galoparodha are found in all patients along with halitosis and jugulo-diastic lymphadenopathy. The physician can decide the modality of treatment (medical, para surgical or surgical) after assessing the chronicity of the condition. In most cases of chronic tonsillitis, medical management, making use of different Kashaya preparations and Choornas is beneficial. Added to this, para surgical procedure of Kshara Karma and Pratisarana with Apamarga Kshara is greatly made use of in day to day practice.
CONCLUSION
The explanations given by the authoritative texts of Ayurveda can be converted into standard norms for the better understanding of chronic tonsillitis with the help of modern science. Thus it can be concluded that Tundikeri is a Kaarthaga Vyadhi which is more predominantly seen in children where the signs and symptoms correlates with chronic type of tonsillitis. If the condition is left untreated it may lead to several serious health hazards.

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REFERENCES

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