

**CHRONIC TONSILLITIS IN CHILDREN: AN AYURVEDIC BIRD VIEW**Arun Raj G. R<sup>1</sup> Shailaja U<sup>1</sup> Rao Prasanna N<sup>2</sup> Debnath Parikshit<sup>3</sup><sup>1</sup>Dept. of Kaumarabhritya, <sup>2</sup>Dept. of Shalya Tantra, <sup>3</sup>Dept. of Swastavritta,  
SDM College of Ayurveda and Hospital, Hassan, Karnataka, India**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 *Urdhvajatrugata roga*; mentioned in *Talugataroga* (diseases of palate) as well as *Kanthagataroga* (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.<sup>1</sup> 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.<sup>2</sup> It's most common in children aged 3 to 7, who have larger tonsils than adults and older children.<sup>4</sup> However, it is estimated that

15% of all visits to family doctors are because of chronic tonsillitis.<sup>3</sup>

**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.<sup>4</sup>

**Subtypes of chronic tonsillitis<sup>5</sup>**

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<sup>6</sup>**

- 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 vanakarpasiphalm*” which means *Tundikeri* resembles *Vanakarpasika Phalam* (cotton fruit).<sup>7</sup> In *Charaka Samhita* there is no direct reference about *Tundikeri*. But it can be taken under the context of *Ekadesheeya Shotha* (localized swelling).<sup>8</sup> In *Sushruta Samhita*<sup>9</sup> and *Astanga Hridaya*,<sup>10</sup> the disease is characterized by *Sthoolashotha* (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*<sup>11</sup> commentary of *Madhava Nidana*, two types of *Tundikeri* are explained. This classification is based on *Lakshana* and *Dosha* predominance. *Yogaratanakara*<sup>12</sup> 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 aetiologies can be divided into *Aharaja hetus* (dietary causes) and *Viharaja etus* (causes related with regimens).<sup>13-14</sup>

#### **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***

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

**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*)<sup>15</sup> 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 (*Sirayama*) where the *Shotha* is to occur.<sup>16</sup>

**Roopa (signs and symptoms)**

According to *Susruta*, *Tundikeri* is characterized by large cystic swelling (*Sthula Sopha*) associated with pricking

pain (*Toda*), burning sensation (*Daha*) and suppuration (*Prapaka*). *Dosha* involvement is as that of *Galashundika* i.e. ‘*Kapha*’ and ‘*Rakta*’.<sup>17</sup> *Vagbhata* opines that ‘*Tundikeri*’ is the ‘*Katina Shopha*’ (hard swelling) that occurs in the region of *Hanusandhi* (temporomandibular region) resembling with the fruit of *Karpasa* (cotton plant).<sup>18</sup> *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)<sup>19</sup>**

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 Pradesha* 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<sup>20</sup>

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*, *Shwasa* and *Kasa*

**Saadhyaasadyata** (prognosis): *Shas-trasadhya vyadhi*<sup>21</sup> / *Oushadhasadya*<sup>22</sup>

**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.<sup>23</sup> 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*, *Talisapatradi Choorna*, *Triphala Choorna* and *Tridoshanashaka Yoga* are specially indicated in chronic cases of tonsillitis.<sup>24</sup>

**Lehya preparation**: *Agastya Rasayana*, *Dashamulaharitaki Leahya* 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<sup>25</sup>

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

**Taila preparation**:<sup>26</sup> *Teekshna Nasya* is indicated in with the *Taila* preparation of *Devadru 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 *Suvarna vasantha malati Rasa* are indicated.

### Para surgical management<sup>27</sup>

The para surgical management of *Tundikeri* can be done with:

**Raktamokshana**: The classics have advised to perform *Raktamokshana*, at *Upanasika Sira*<sup>28</sup> as there is predominance of *Kapha* and *Rakta Dosha*.<sup>29</sup>

**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<sup>30</sup>

**Pratisarana**:<sup>31</sup> 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**<sup>32</sup>: *Shastrakarma* elaborated for *Galashundi (Chedana)* can be adopted in *Tundikeri*. *Dalhana* has classified *Tundikeri* under *Bhedana Sadhya Vyadhi*.<sup>33</sup> All *Shastrakarma* should be performed in three steps.<sup>34</sup>

**Poorvakarma**: The patient is advised to perform *Kavala-Gandoosha* with *Kashaya* of *Kaphanashaka Dravya*. Then *Pra-*

*tisara* is done with *Sukshma Choorna* of *Kushta*, *Maricha*, *Vacha*, *Saindhava Lavana*, *Pippali*, *Patha* and *Musta* in equal quantity added with honey.

**Pradhanakarma:** *Tundikeri* is gripped properly with *Sandamsha Yantra* and *Chedana* is done with *Mandalagra Shastra* at appropriate place.

**Paschyatakarma:** After *Chedana*, *Pratisarana* should be done with *Pippali*, *Ativisha*, *Kushta*, *Vacha*, *Maricha*, *Shunthi*, *Madhu* and *Saindhava Lavana*. *Sushruta* added *Shyonyaka* and *Patha* instead of *Pippali* and *Shunthi* of *Yogaratanakara* formulation for *Pratisarana*. *Kavala* with *Kwatha* of *Vacha*, *Ativisha*, *Patha*, *Rasna*, *Katukarohini*, and *Nimba* can also be done. *Dhoomapana* 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**<sup>35</sup>

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 (*Dhoomapanam*), surgical procedure (*Sashtra karma*), cauterisation (*Agnikarma*), *Thrunadhanayam* (a kind of ce-real), *Yava* (*Hordeum vulgare*), *Mudga* (*Phaseolus mungo*), *Kulattha* (*Dolichos biflorus*), *Jangala mamsa rasa* (meat soup), *Bahupatri*, *Karavella* (*Momordia cherantiana*), *Patola* (*Trichosanthes dioica*), *Balamula* (*Sida coridfolia*), *Karpooraneeram*, *Tambula* (*Piper betle*), *Taptambu* (boiled water), *Khadira* (*Acacia catechu*) and *Ghrita* (ghee).

#### **Apathya in Tundikeri**<sup>36</sup>

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, Katina anna*), sleeping with head inclining down (*Adhomukha shayana*), substances which are hard to digest (*Guru ahara*), food stuffs causing obstruction of body channels (*Abhishyandi*) 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-digastric 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 *Kanthagata 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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