

COMPARATIVE PERSPECTIVES ON *TUNDIKERI* (TONSILLITIS): AYURVEDA AND MODERN MEDICINE IN ACUTE CARE AND RECURRENCE PREVENTIONDr. Shaweta*, ¹Dr. Rashmi Bisht, ²Dr. Swati Chauhan, ³Dr. Ankita

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ABSTRACT

Tundikeri, described in *Ayurveda* and known in modern medicine as tonsillitis, is among the most common throat disorders affecting both children and adults.^[1] It typically presents with sore throat, fever, painful swallowing, and enlarged tonsils, leading to significant school absenteeism and frequent medical consultations.^[2] In modern medicine, management relies primarily on antibiotics and, in resistant or recurrent cases, surgical tonsillectomy. While these approaches provide rapid relief, overuse of antibiotics has contributed to antimicrobial resistance, and surgery carries inherent risks without fully preventing susceptibility to future infections.^[5] *Ayurveda*, by contrast, offers a broader and more integrative framework of management that emphasizes both curative and preventive strategies. Local therapies such as *Vachadi Kwath* for gargling and *Pippalyadi Pratisarana* for topical application are combined with systemic formulations like *Kanchanar Guggulu*, which aim to correct underlying imbalances and reduce recurrence.^[10,13] Additionally, *Rasayana* therapies, dietary modifications, and lifestyle regulations are prescribed to strengthen host immunity and improve long-term resilience.^[15] This review highlights the comparative and complementary perspectives of the two systems. While modern medicine ensures prompt control of acute infections, *Ayurveda* offers a sustainable approach focused on prevention and immune enhancement. Together, they provide a synergistic framework where biomedical interventions safeguard emergencies and *Ayurveda* maintains long-term balance.

KEYWORDS: *Tundikeri*, Tonsillitis, *Ayurveda*, Allopathy, Synergy, *Vachadi Kwath*, *Pippalyadi Pratisarana*, Antibiotics, *Kanchanar Guggulu*.

INTRODUCTION

In *ayurveda*, *tundikeri* is described under *Mukha gata roga* (disease of oral cavity), included in *Talugata rogas* (palatal disease) or *kanthgata rogas* (throat disease) by different *Acharyas*.^[13-15] It is described as a *Sthula Shotha* (gross swelling) associated with *Toda* (pricking pain), *Daha* (burning sensation), and *Prapaka* (suppuration). The resemblance of the tonsillar swelling to *Vanakarpasi Phala* (wild cotton fruit) highlights its clinical presentation.^[14]

Where as in modern medicine Tonsillitis refers to inflammation of the palatine tonsils and usually presents with sore throat, painful swallowing, fever, and reddened or pus-covered tonsils.^[1] It is a common reason for medical visits worldwide, accounting for about 1.3% of outpatient cases.^[2] The palatine tonsils, located in the lateral oropharynx between the palatoglossal and palatopharyngeal arches, are made up of lymphoid tissue and form an important part of the Waldeyer's ring. They act as a primary immune defence against inhaled or ingested microorganisms.

Prevalence of acute tonsillitis is most often infectious and diagnosed clinically. Viral infections are responsible for the majority of cases—about 70% to 95%—while bacterial infections, especially from *Streptococcus pyogenes* (group A Streptococcus), cause 5% to 15% of adult cases and 15% to 30% of paediatric cases, most commonly in children aged 5 to 15 years.^[3,4] Prompt distinction between viral and bacterial tonsillitis is important to ensure rational antibiotic use and to prevent complications such as peritonsillar abscess, rheumatic fever, and post-streptococcal glomerulonephritis.^[9,12]

ETIOLOGY

In *Ayurveda*, disease manifestation is attributed to exposure to *nidanās* (etiological factors) or imbalances in the *doshas*. In *Tundikeri*, the predominant doshas involved are *Kapha* and *Rakta*, and their vitiation leads to the development of characteristic signs and symptoms. The causative factors closely resemble those described in other *mukhagata rogas* (oral cavity disorders). Broadly, these *nidanās* can be categorized into *Aharaja* (dietary) and *Viharaja* (lifestyle) factors.^[13-15]

1. Aharaja nidana (dietary factors)

Consumption of certain food substances that aggravate *Kapha* and *Rakta* contribute to the onset of *Tundikeri*. These include:

- **Matsya** – Fish
- **Mahisha Mamsa** – Buffalo meat
- **Varaha Mamsa** – Boar/Pig meat
- **Anupa Pishitha Mamsa Sevana** – Flesh of marshy/aquatic animals
- **Ama Moolaka** – Raw radish
- **Masha Yusha** – Soup prepared from black gram (*Urad dal*)
- **Dadhi** – Curd/Yogurt
- **Ksheera** – Milk (especially in excess or incompatible combinations)
- **Sukta** – Fermented gruel
- **Ikshu Rasa** – Sugarcane juice
- **Phanita** – Half-cooked molasses

2. Viharaja (Lifestyle Factors)

Although not exhaustively described, improper lifestyle habits that aggravate *Kapha* and impair *Rakta* (such as excessive day sleep, sedentary habits, and indulgence in heavy or unwholesome regimens) are contributory.

In modern medicine, it is mainly caused by infectious agents, with viruses accounting for the majority of cases. While viral infections usually present as part of upper respiratory illnesses, bacterial causes remain clinically important due to their potential for complications and recurrence. The condition may also involve polymicrobial infections and alterations in tonsillar microbiota, which contribute to chronicity.^[1,3,4]

1. Viral Causes (most common, ~70–95%)

- Rhinovirus
- Respiratory syncytial virus
- Adenovirus
- Coronavirus
- Epstein–Barr virus (EBV) – more severe/prolonged illness
- Cytomegalovirus
- Human immunodeficiency virus (HIV)

2. Bacterial Causes

- Most common: Group A beta-haemolytic *Streptococcus* (*Streptococcus pyogenes*), especially in children (5–15 years).
- Other significant pathogens:
 - *Staphylococcus aureus*
 - *Streptococcus pneumoniae*
 - *Haemophilus influenzae*
 - *Fusobacterium necrophorum* (adolescents/young adults)
 - *Streptococcus dysgalactiae*

3. Less Common Bacterial Agents

- *Mycoplasma pneumoniae*
- *Chlamydophila pneumoniae*

- *Neisseria gonorrhoeae* (sexually active individuals)
- *Corynebacterium diphtheriae* (in unvaccinated)
- *Mycobacterium tuberculosis* (chronic/recurrent, high-risk groups)

4. Recurrent Tonsillitis

- Often polymicrobial.
- Biofilm-forming organisms: *Staphylococcus aureus*, *Haemophilus influenzae*.
- Linked with dysbiosis → reduced microbial diversity in tonsillar microbiota.

ETIOPATHOGENESIS

According to Ayurveda

Although a direct *Samprapti* of *Tundikeri* is not explicitly described in the *Brihatrayi*, its pathogenesis can be interpreted through *Dosha–Dushya Vivechana* as follows^[13–15]:

- Nidana (Causative factors) – Indulgence in causative factors leads to vitiation of *Kapha* dosha.
- Dosha *gati* (Movement of vitiated *Kapha*) – The aggravated *Kapha* circulates through the *siras* (veins) and tends to localize in the *mukha pradesha* (oral region), since the *urdhwanga* is considered the natural seat of *Kapha*.
- Samprapti *ghataka* (Pathogenetic sequence)
 - Dosha – *Kapha* with association of *Rakta*
 - Dushya – *Rakta*, *Mamsa*
 - Srotas – *Rasavaha*, *Raktavaha*, *Pranavaha* (locally in *Gala pradesha*)
 - Adhisthana – *Kantha* / *Talu pradesha*
- *Vyakti* (Clinical manifestation) – The vitiated *Kapha* along with *Rakta* produces a **cystic swelling**, resembling the fruit of *Vana Karpasa* (wild cotton). It presents with *daha* (burning sensation), *toda* (pricking pain), and *shopha* (suppurative swelling) in the throat region.

According To Modern Science

In modern medicine, tonsillitis develops when pathogens invade the tonsillar crypt epithelium, triggering local immune activation and inflammation.^[1,3] Repeated or persistent infections can lead to lymphoid hyperplasia, fibrosis, and chronic tonsillar dysfunction.^[9]

• Anatomical basis

- Tonsils are part of Waldeyer's ring (palatine, pharyngeal/adenoids, lingual, tubal tonsils).
- Palatine tonsils, located between palatoglossal and palatopharyngeal arches, are most commonly involved.

• Entry of pathogens

- Microorganisms (bacterial/viral) penetrate the tonsillar epithelium.
- Epithelial crypts act as a nidus, favouring microbial colonization.

- **Immune activation**
 - Invading organisms are phagocytosed by macrophages.
 - Antigens are processed and presented to B and T lymphocytes.
 - This initiates both **humoral (antibody-mediated)** and **cell-mediated** immune responses.
- **Inflammatory response**
 - Cytokine release and vascular changes cause local swelling, erythema, and pain.
 - Acute inflammation manifests as **edema, exudate, and enlargement** of tonsils.
- **Chronicity and hyperplasia**
 - Recurrent or persistent infections overwhelm the defence mechanism.
 - Leads to lymphoid hyperplasia, fibrosis, and chronic tonsillar inflammation, reducing functional immune efficiency.

CLINICAL FEATURES / LAKSHANAS

Clinical Features of *Tundikeri* in Ayurvedic Classics

As per Acharya Sushruta^[14]

- **Toda** – pricking type of pain
- **Shopha** – swelling in the throat region
- **Daha** – burning sensation
- **Prapaka** – suppuration tendency

As per Acharya Vagbhata^[15]

- **Karpāsiphala ākāra Shopha** – swelling resembling a cotton fruit in shape
- **Pichchhila** – slimy/mucilaginous in nature
- **Mandaruk** – associated with mild pain

Clinical features of tonsillitis in Modern Sciences

- Population with acute tonsillitis exhibit –
- Enlarged Inflamed Tonsils
- Sore Throat
- Fever
- Foul Breath
- Difficulty in swallowing
- Painful Swallowing
- Tender cervical lymph nodes
- Air way obstruction may cause
 - Mouth Breathing
 - Snoring
 - Sleep Disorders
- Malaise and lethargy
- In ebv infection cases a grey membrane over tonsils, which can be easily removed without bleeding
- Palatal mucosal erosions and mucosal petechiae of hard palate.

DIAGNOSIS

Ayurvedic Diagnostic Approach to *Tundikeri*

- **Darshana Pareeksha** (Inspection): Throat swelling (*Karpāsiphala ākāra*), congestion, slimy surface, signs of suppuration.

- **Prashna Pareeksha** (History): *Toda* (pricking pain), *Daha* (burning), *Mandaruk* (mild pain), recurrent throat irritation, dietary & seasonal triggers.
- **Sparshana Pareeksha** (Palpation): Local tenderness, warmth, softness indicating inflammatory or suppurative change.
- **Nidana Panchaka**:
 - Nidana – Kapha-Pitta vitiating factors (Amla, Katu, Abhishyandi ahara, cold exposure).
 - Rupa – Toda, Shopha, Daha, Prapaka.
 - Upashaya – Relief with *Kaval*, *Pratisarana*, *Tikta–Kashaya dravyas*.
- **Bheda** (Differential): Distinguish from *Kantashotha*, *Mukhapaka*, *Raktarbuda*.

Modern Diagnostic Features of Tonsillitis

- **Examination**: Tonsillar erythema, hypertrophy/exudates, tender anterior cervical nodes, palatal petechiae, fever >38 °C, absence of cough (bacterial clue).
- **Complications**: Uvular deviation, trismus, asymmetric tonsil, or neck swelling → abscess suspicion.^[9,12]
- **Special clues**: Posterior nodes + splenomegaly (EBV), scarlatiniform rash (GAS).
- **History**: Duration, viral features (cough, rhinorrhea), recurrent episodes, immunocompromised status, STI risk.
- **Diagnosis**: Clinical + scoring tools (Centor, McIsaac, FeverPAIN).^[3,4]
- **Tests**: RADT (rapid strep), throat culture (gold standard), EBV serology, NAAT for gonorrhea/chlamydia.^[4,6]
- **Imaging**: CT neck (abscess/deep infection), USG in children.^[12]

MANAGEMENT

Management of *Tundikeri* (Ayurvedic Perspective)

1. General Principles

- **Treatment** aims at *Kapha–Pitta shamana*, reduction of *shopha* (swelling), *daha* (burning), and *toda* (pain), with prevention of *prapaka* (suppuration).

2. Local Therapies (Shalakya Kriya Kalpa)

- **Kavala / Gandusha**: With *Tikta–Kashaya dravyas* such as *Triphala*, *Yashtimadhu*, *Haridra*, *vachadi dravya*.^[16]
- **Pratisarana**: Application of *Pippalyadi churna*^[17] or *Yashtimadhu* with honey/*ghrita*.
- **Dhoopana / Dhuma**: Medicated fumigation to reduce Kapha accumulation.^[14,15]

3. Internal Medicines

- **Kwatha / Kashaya**: *Vachadi Kwath*^[16], *Khadiradi kwath*, *Triphala kwath*.
- **Guggulu Preparations**: *Kanchanara Guggulu*, *Trayodashanga Guggulu*.^[10]
- **Other Useful Formulations**: *Sitopaladi churna*, *Tankana bhasma*, *Yashtimadhu*.

4. *Shodhana* (in Chronic/Recurrent Cases)

- *Vamana / Virechana: For Kapha–Pitta dushti.*^[13,14]
- *Nasya: With Anu Taila or Shadbindu Taila in chronic throat affections.*^[14,15]

5. *Pathya–Apathya* (Diet & Lifestyle)

- *Pathya:* Warm water, light digestible food, use of turmeric, ginger, black pepper.
- *Apathya:* Avoid cold, sour, oily, heavy foods, excessive talking, and exposure to dust/smoke.

6. *Shalya karma* – In *Ayurveda*, *Tundikeri* is first treated with *Shamana Chikitsa*. If relief is not achieved, *Bhedana Karma* (incision) is advised as per *Sushruta Samhita*. Post-procedure care includes:

- *Pratisarana – local medicated application*
- *Kavala – therapeutic gargling*
- *Dhoompana – medicated smoking*
- *Pathya – dietary and lifestyle regimen*^[14]

Management of tonsillitis (Modern Perspective)

It depends on underlying etiology, severity of symptoms and risk of complication. Mostly are viral and bacterial self-limiting, requiring only supportive care.^[3,11]

1. Conservative treatment

• Supportive care

Most of the cases of tonsillitis requiring only symptomatic management.

Recommended measures include

- Adequate Hydration
- Rest
- Analgesics (E.G. Acetaminophen)
- NSAIDS,
- Throat Lozenges
- Warm Salt-Water Gargles
- Topical Agents Like Viscous Lidocaine
- Herbal Remedies
- Zinc Gluconate.

- **Corticosteroids** – single dose of Dexamethasone is used but its only for short-term relief with severe odynophagia. Long time use may cause risk.^[7,8]
- **Antibiotics:** Penicillin V/Amoxicillin (10 days); alternatives – Azithromycin, Clarithromycin, Cephalosporins. Prevents complications but risk of resistance & GI upset.^[4,6]
- **Recurrent Tonsillitis:** Assess systemic causes; preferred – Clindamycin or Amoxicillin-Clavulanate; prophylaxis with long-acting penicillin/low-dose azithromycin; tonsillectomy if persistent.

2. Surgical management

Surgical intervention remains a key modality in recurrent tonsillitis and tonsillar hypertrophy when conservative measures fail. The role of surgery is supported by well-established criteria and guideline-based recommendations, with procedure choice and timing tailored to age, severity, and comorbidities.^[5]

• Indications (*Paradise criteria*)

- ≥7 documented episodes in one year
- ≥5 episodes/year for two consecutive years
- ≥3 episodes/year for three consecutive years
- Each episode must include fever >38.3 °C, tonsillar exudate, cervical lymphadenopathy, and antibiotic therapy.

• Special situations

- Obstructive sleep apnea due to tonsillar hypertrophy.
- Comorbidities such as PFAPA syndrome, immunosuppression, or antibiotic allergy/intolerance.

• Procedure preference

- Tonsillectomy: Standard for recurrent tonsillitis (per Paradise criteria) and in Anglo-American guidelines for OSA.
- Tonsillotomy: Favored in European practice (Austria, Netherlands) for paediatric hypertrophy/OSA due to lower bleeding risk and partial lymphoid preservation.

• Risks and limitations

- Tonsillectomy decreases but does not abolish future infections.
- Main complication: secondary haemorrhage, especially in children <8 years.
- Tonsils contribute to immune competence until ~12 years, though long-term immunodeficiency post-removal is not proven.

• Clinical approach

- Indications must be individualized, balancing morbidity reduction with surgical risk.
- Strict adherence to criteria and age-specific guidelines ensures safe and judicious application.

DISCUSSION

The comparative study of *Tundikeri* and tonsillitis reveals distinct paradigms:

- Modern medicine offers standardized, evidence-based acute care that is indispensable for rapid symptom relief and prevention of serious complications such as peritonsillar abscess, rheumatic fever, and post-streptococcal sequelae.^[1,3,9]
- *Ayurveda* views *Tundikeri* within a systemic framework of *dosha–dushya samprapti*, addressing root imbalances rather than only local inflammation. By employing *kriya-kalpa*, internal medicines, and *rasayana chikitsa*, it emphasizes recurrence prevention, immune strengthening, and lifestyle balance.
- Overlap exists in symptomatic measures: gargling, local applications, warm fluids, and dietary care are common to both traditions.^[3,10]

The challenge lies in the limitations of each: antibiotics overuse leading to resistance in modern medicine^[4,6], and

lack of large-scale clinical validation for *Ayurvedic* formulations.^[10] However, integrative models are promising—using antibiotics in confirmed bacterial cases while simultaneously applying *Ayurvedic* therapies for long-term immune modulation and reduced recurrence.

CONCLUSION: A SYNERGISTIC APPROACH

Tundikeri (tonsillitis) exemplifies a condition where *Ayurveda* and modern medicine can complement each other rather than compete. Modern protocols ensure **safety in acute bacterial infections**, while *Ayurvedic* regimens offer **durable preventive and immune-enhancing strategies**.

- **In acute care:** Modern diagnostics and antibiotics (when indicated) can be supplemented with *Ayurvedic kriya-kalpa* (*Vachadi Kwath* gargle, *Pippalyadi Pratisarana*) for faster local relief.^[3,4,7,10]
- **In recurrence prevention:** *Rasayana* therapy, dietary-lifestyle modification, and systemic formulations like *Kanchanar Guggulu* may reduce recurrence, antibiotic dependency, and surgical need.
- **At a public health level:** Such synergy could reduce antimicrobial resistance, improve quality of life, and provide cost-effective, holistic care.^[6,11]

Thus, **the best outcome for patients lies in an integrative protocol**, where modern medicine addresses emergencies, and *Ayurveda* sustains **long-term health and resilience**.

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CONFLICT OF INTEREST

The author declares no conflict of interest.

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