

AYURVEDIC MANAGEMENT OF CHRONIC SUPPURATIVE OTITIS MEDIA (CSOM): A CONCEPTUAL AND INTEGRATIVE REVIEW WITH PAEDIATRIC CONSIDERATIONS

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ABSTRACT

Background: Chronic Suppurative Otitis Media (CSOM) is a persistent inflammation of the middle ear characterized by recurrent otorrhea through a tympanic membrane perforation. It predominantly affects pediatric populations and remains a significant cause of preventable hearing loss worldwide. Ayurveda describes analogous conditions under *Karnaroga*, particularly *Karna Srava* and *Putikarna*, offering holistic therapeutic strategies. **Objective:** To critically review the Ayurvedic understanding and management of CSOM, correlate it with modern otology, integrate pediatric (Kaumarbhritya) considerations, and propose an evidence-backed holistic treatment framework. **Methods:** A systematic literature review was conducted using PubMed, Google Scholar, DHARA, AYUSH Research Portal, and classical Ayurvedic texts (Charaka, Sushruta, Ashtanga Hridaya, Kashyapa Samhita). **Keywords included:** CSOM, Ayurveda, Karnaroga, Karna Srava, Karna Shoola, Karna Purana, pediatric otitis media. Commentaries and Nighantus were analyzed for conceptual

clarity. Relevant modern ENT guidelines and research studies were included. **Results:** Ayurveda attributes CSOM-like conditions to *Kapha-Pitta* vitiation, *krimi*, *srotodushti*, and improper ear hygiene. Classical Ayurvedic therapies including *Karna Purana*, *Dhoopana*, *Kashaya Prayoga*, *Shamana* drugs (Triphala, Haridra, Yashtimadhu), and *Rasayana* showed significant therapeutic potential. Pediatric-specific modifications emphasize gentle *Shamana* therapy, immune support, safe *Karna Purana*, management of recurrent URTI, and dietary corrections. Integrative protocols combining modern antibiotics with Ayurvedic interventions yield improved mucosal healing, reduced recurrence, and lower antibiotic resistance. **Conclusion:** Ayurveda offers a comprehensive framework for managing CSOM through anti-inflammatory, antimicrobial, immunomodulatory, and tissue-healing therapies. Paediatric-focused interventions strengthen immunity, reduce recurrence, and support normal hearing and speech development. Integrative management holds promise for addressing chronicity, recurrence, and antibiotic resistance.

KEYWORDS: CSOM, Chronic Suppurative Otitis Media, *Karnaroga*, *Karna Srava*, *Karna Purana*, Ayurveda, Paediatric Otitis Media, *Kapha-Pitta Dushti*, *Rasayana*, Integrative Otology.

1. INTRODUCTION

Chronic Suppurative Otitis Media (CSOM) is a long-standing middle ear infection with persistent ear discharge and tympanic membrane perforation. Globally, approximately 65–330 million individuals suffer from CSOM, of whom children form a major proportion. In India, the paediatric prevalence ranges from 7–15%, contributing to significant morbidity and preventable conductive hearing loss.^[1,2]

Complications such as mastoiditis, facial nerve palsy, intracranial abscess, and cholesteatoma underscore the importance of early and holistic management.

Ayurvedic Correlation

Ayurvedic texts describe similar clinical entities under *Karnaroga*, especially:

- *Karna Srava* (ear discharge) – Sushruta Samhita, Uttara Tantra 21
- *Putikarna* (foul-smelling discharge)
- *Karna Shoola* (ear pain)
- *Vidradhi in Karna* (suppurative infections)

The pathophysiology involves *Kapha-Pitta dushti*, *srotorodha*, and *krimija* conditions affecting the ear.

Classical references include

- *Charaka Samhita (Chikitsa Sthana 26)*
- *Sushruta Samhita (Uttara Tantra 21–23)*
- *Ashtanga Hridaya (Uttara Sthana 15)*
- *Kashyapa Samhita (Khila Sthana – Bala roga and ENT correlations)*

Need for Integrative Approaches

Modern management relies upon antibiotics and surgery; however, recurrence, microbial resistance, and poor mucosal healing in children necessitate complementary approaches. Ayurveda provides durable, safe mucosal-healing and immune-modulating therapies.

AIM

To explore Ayurvedic concepts, treatments, paediatric considerations, and integrative management strategies for CSOM.

2. METHODS

2.1 Literature Search Strategy

Databases searched:

- PubMed
- Google Scholar
- AYUSH Research Portal
- DHARA

Classical sources included

- *Charaka Samhita* with Chakrapani commentary
- *Sushruta Samhita* with Dalhana commentary
- *Ashtanga Hridaya* with Arundatta commentary
- *Kashyapa Samhita*
- Nighantus (Dhanvantari, Raja, Bhavaprakasha)

Inclusion Criteria

- Classical references to ear disorders
- Clinical or experimental studies on Ayurvedic ENT therapies

- ENT references relevant to CSOM
- Paediatric otitis media literature

Exclusion Criteria

- Non-relevant studies
- Non-peer-reviewed articles
- Acute otitis media without complications

Conceptual Framework

Textual exegesis, cross-comparison of commentaries, pharmacological profiling of Ayurvedic drugs, and integrative analysis were conducted.

3. RESULTS (Review Findings)

3.1 Nidana (Etiology) of *Karna Srava* / CSOM

- *Kapha-Pitta* aggravation
- Cold exposure (*Sheetala Ahara-Vihara*)
- Improper breastfeeding positions (paediatric risk factor per *Kashyapa*)
- Recurrent URTI (*Pratishyaya*)
- Poor ear hygiene
- *Krimi* (microbial infection)

3.2 *Samprapti* (Pathogenesis)

- *Kapha* → mucosal edema, blockage
- *Pitta* → inflammation, discharge
- *Krimi* → persistent infection
- *Srotorodha* → chronic middle ear pathology
- Tissue breakdown → perforation and otorrhea

3.3 *Lakshana* Correlation

Ayurvedic symptoms:

- *Srava* (discharge)
- *Durgandha* (foul smell)
- *Shoola* (pain)
- *Badhirya* (hearing impairment)

These closely match CSOM features: otorrhea, conductive hearing loss, recurrent infections.

3.4 Chikitsa Siddhanta for Karnaroga

Based on *Sushruta Samhita*, management includes:

- *Shodhana* (where appropriate)
- *Shamana*
- *Karna Purana*
- *Dhoopana*
- *Kashaya Pralepa*
- *Krimighna, Shothahara, Vranaropana* medicines

3.5 Ayurvedic Treatment Protocols

A. Shodhana Therapies

1. Nasya

- Clears *Kapha* in ENT region
- Useful in post-infective stages

2. Virechana

- Mild *virechana* for *Pitta shodhana* in adults.

Note: Avoid strong *shodhana* in pediatric cases; gentle purgation only if indicated.

B. Shamana Therapies (Primary for Paediatrics)

Drug/Formulation	Properties	Relevance in CSOM
<i>Triphala</i>	<i>Vrana shodhana–ropana</i>	Drying and healing
<i>Haridra</i>	<i>Krimighna, Shothahara</i>	Controls infection
<i>Yashtimadhu</i>	Mucosal healing	Tympanic health
<i>Guduchi</i>	Immunomodulatory	Prevents recurrence
<i>Gandhak Rasayana</i>	Antimicrobial	Chronic discharges

C. Karna Purana (Ear Instillation)

Formulations:

- *Saindhavadi Taila*
- *Bilvadi Taila*
- *Nirgundi Taila*

Actions: *Shothahara, Vedanasthapana, Krimighna, Vranaropana.*

Method: Lukewarm oil, 2–4 drops, after ENT evaluation.

D. Dhoopana (Ear Fumigation)

- *Guggulu, Vacha, Haridra*
- Useful in chronic, non-acute discharges

E. Internal Medicines

- *Dashamoola Kashaya*
- *Amrutarishta*
- *Nagakesara + Haridra*
- *Pippali*-based formulations for chronicity

F. Rasayana Support

- *Chyavanaprasha*
- *Guduchi rasayana*
- *Swarna Bindu Prashana* (children)

3.6 Contemporary Evidence

- *Haridra, Nirgundi, and Triphala* possess proven antimicrobial activity against *Pseudomonas* and *Staphylococcus* species.^[12]
- *Rasayana* drugs exhibit mucosal regenerative properties.^[13]
- Herbal ear drops in clinical trials showed faster symptom reduction vs. conventional therapy.^[14]

3.7 Comparative Ayurveda vs. Modern ENT Approach

Aspect	Modern ENT	Ayurveda	Integrative Outcome
Infection control	Antibiotics	<i>Krimighna</i> herbs	Better clearance; lower resistance
Inflammation	Steroids	<i>Shothahara</i>	Sustained reduction
Healing	Surgical repair	<i>Vranaropana & Rasayana</i>	Better mucosal recovery
Recurrence	Common	Immune boosting	Reduced recurrence

3.8 Paediatric Ayurvedic Considerations (Integrated)

Why children are more affected:

- Short, horizontal Eustachian tube
- Kapha-pradhana physiology
- Recurrent URTI
- *Stanya dushti* (Ayurvedic perspective)

Pediatric Shamana-based Protocol

Age	Internal Medication	Dose
2–5 yrs	<i>Triphala Kashaya</i>	2–5 ml BD
2–5 yrs	<i>Guduchi Satva</i>	250–500 mg OD
2–10 yrs	<i>Yashtimadhu</i>	250 mg BD
>2 yrs	<i>Chyavanaprasha</i>	1–3 g/day

Paediatric Karna Purana

- Only after ENT examination
- 1–2 drops lukewarm *Bilvadi/Nirgundi Taila*
- Avoid in acute pain or large perforation

Paediatric Rasayana

- *Swarna Prashana* monthly
- *Guduchi* and *Yashtimadhu* for immune enhancement

Paediatric Dhoopana

- Mild, indirect fumigation only

Addressing URTI

- *Sitopaladi Churna*
- *Vasavaleha*
- Warm diet, avoidance of curd/ice cream

Importance

Prevents conductive hearing loss, supports speech development, reduces recurrence.

4. DISCUSSION

The Ayurvedic framework of *Karna Srava* and *Putikarna* aligns closely with CSOM. The multi-factorial pathogenesis involving *Kapha-Pitta* imbalance, *srotorodha*, *krimi* involvement, and chronic inflammation establishes logical therapeutic targets.

Ayurvedic interventions provide

- **Antimicrobial action** (*Haridra*, *Triphala*, *Nirgundi*)
- **Anti-inflammatory action** (*Dashamoola*, *Bilva*)
- **Mucosal healing and tissue regeneration** (*Yashtimadhu*, *Ghrita*)
- **Immune enhancement** (*Guduchi*, *Rasayana*)

Paediatric Relevance

Children benefit from:

- Gentle *Shamana* therapy
- *Karna Purana* with caution
- Immune-supportive *Rasayana*
- Prevention of URTI-induced recurrence

Integrative Approach Advantages

- Faster resolution of discharge
- Reduced recurrence
- Lower antibiotic resistance
- Superior mucosal healing
- Better paediatric outcomes in hearing and speech

5. CONCLUSION

Ayurvedic management offers a comprehensive, safe, and effective framework for CSOM treatment, especially in recurrent and chronic cases. When integrated with modern ENT care, Ayurvedic therapies enhance mucosal healing, reduce recurrence, and support immune function. Pediatric-focused Ayurvedic strategies are particularly beneficial for preventing long-term complications such as hearing loss and speech delay. Future research should explore standardized Ayurvedic formulations and large-scale integrative clinical trials.

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