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REVISITING *KARNASRAVA*: INTEGRATING AYURVEDIC CONCEPTS WITH MODERN OTOLOGICAL INSIGHTS

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ABSTRACT

Karnasrava is an ear disorder described in Ayurvedic literature, primarily characterized by chronic ear discharge, whereas Chronic Suppurative Otitis Media (CSOM) is a well-defined otological condition involving persistent middle-ear infection with tympanic membrane perforation. Despite arising from distinct medical paradigms, both conditions exhibit notable similarities in etiology, pathogenesis, clinical features, and management principles. This review aims to interpret Karnasrava through the conceptual framework of CSOM to establish a meaningful correlation between the two entities. Classical Ayurvedic texts, including Sushruta Samhita and allied treatises, were critically analyzed alongside contemporary otological literature. Ayurvedic concepts such as Nidana Sevana, Avarana of Vata, Kapha involvement, and Sthana Sanshraya demonstrate close parallels with modern mechanisms including Eustachian tube dysfunction, chronic mucosal inflammation, persistent infection, and impaired middle ear ventilation. Clinical manifestations such as otorrhoea, pain, itching, and hearing impairment further support this correlation. Additionally, the concept of Putikarna, characterized by foul-smelling discharge, aligns with the clinical presentation of squamosal CSOM associated with cholesteatoma and necrotic changes. Therapeutic approaches in Ayurveda, including local procedures, show functional similarity to modern strategies focused on infection control, dry ear maintenance, and tissue healing. Thus, Karnasrava can be correlated with mucosal CSOM, while Putikarna corresponds to the squamosal type, supporting an integrative approach to disease understanding and management.

KEYWORDS: *Karnasrava, CSOM, Chronic Suppurative Otitis Media, Karnaroga, Shalakya tantra, Mucosal and Squamosal CSOM, Putikarna, Tubo-tympanic CSOM, Attico-antral CSOM.*

INTRODUCTION

Karna is one of the *Panchgyanendriya* [1] and is regarded as the *adhiṣhṭhana* of *Shrotendriya* in Ayurveda. From the modern perspective, the ear is a specialized sensory organ responsible not only for the perception of sound but also for the maintenance of equilibrium through its vestibular apparatus. Thus, both Ayurvedic and contemporary sciences recognize the ear as vital for hearing and balance. *Acharya Sushruta* has described 28 *Karnagata Rogas* in the Ayurveda classics [2]. Among these, *Karnasrava* is an important disease entity classified under ear disorders. The presence of *Puya yukta Srava* is considered the classical and characteristic clinical feature of this condition. *Acharya Charak* has mentioned *Karnasrava* as a symptom under the four types of *Karnaroga* namely *Vataj, Pittaj, Kaphaj & Sannipataja karnaroga*. [3] *Acharya Vagbhaṭa*, in contrast, has described twenty-five types of *Karnagata Roga* and has written *karnasrava chikitsa* in detail. [4]

Chronic suppurative otitis media (CSOM) is a long-standing infection of middle ear cleft. It is characterized by recurrent or persistent ear discharge (Otorrhoea) over 2 to 6 weeks through a perforation of the tympanic membrane. [5]

A workshop organized jointly by the World Health Organization (WHO) and the CIBA Foundation in 1996 provided a standard definition for chronic suppurative otitis media (CSOM). It defined "Chronic suppurative otitis media (CSOM) as stage of disease in which there is chronic infection of the middle ear cleft, i.e., Eustachian tube, middle ear and mastoid, and in which a non-intact tympanic membrane (e.g., perforation or tympanostomy tube) and discharge (otorrhea) are present for at least 2 weeks or more." [6] CSOM commonly originates during early childhood, with the highest incidence observed around two years of age. Children belonging to socio-economically disadvantaged populations are at a greater risk of developing this condition. [7] In India, the national average prevalence of CSOM is 5.2%, so India falls under the high prevalence zone for CSOM. [8] The etiology of chronic suppurative otitis media is typically polymicrobial in nature. The most common aerobic bacterial agents causing CSOM are Pseudomonas aeruginosa, Escherichia coli, Proteus mirabilis, Klebsiella pneumonia and Staphylococcus aureus. [9]

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CLASSIFICATION OF CSOM

The classification of CSOM has evolved to better represent the disease pathology. Traditionally, it was divided into Tubo-tympanic and Attico-antral types, regarded respectively as Safe and Unsafe forms. In current practice, a pathophysiology-based classification is preferred, categorizing the disease into Mucosal and Squamosal types. [10]

Table 1: COMPARISON OF OTOLOGICAL FEATURES IN MUCOSAL AND SQUAMOSAL CSOM [11]

FEATURES	MUCOSAL TYPE	SQUAMOSAL TYPE
Conventional Nomenclature	Tubo-tympanic/Safe/Benign type of CSOM	Attico-antral/Unsafe/ dangerous type of CSOM
Primary Pathology	Chronic inflammation of middle ear mucosa	Keratinizing stratified squamous epithelium with cholesteatoma
Site Involved	Antero-inferior quadrant of TM	Postero-superior quadrant of TM
Type Of TM Perforation	Central	Marginal
Nature Of Discharge	Profuse, mucoid or mucopurulent	Scanty, purulent, foul-smelling
Hearing Impairment	Usually conductive	Conductive or mixed
Ossicular Involvement	Usually intact or mildly affected	Ossicular necrosis may be present.
Risk Of Complications	Low	High
Retraction Pockets	Absent	Common
Granuloma	Uncommon	Common
Polyp	Pale	Red and fleshy

DIAGNOSTIC APPROACH

1. **Audiological assessment:** Tuning-fork tests and PTA (Pure Tone Audiometry) provide insight into both degree and nature of hearing impairment which is generally conductive and doesn't exceeds 15dB. Disproportionately large conductive hearing deficits suggest concomitant ossicular pathology. [12]
2. **Microbiological analysis –** Accurate microbiological identification of pathogens is essential for guiding effective therapeutic strategies. [13]
3. **Radiological Evaluation:** To focus on mastoid status. [14]

MANAGEMENT STRATEGY [14]

Optimal management of chronic ear discharge through tympanic membrane perforation in high-risk communities requires addressing nutritional status, living conditions, and disease awareness, in addition to conventional medical interventions. [15]

AYURVEDIC PERSPECTIVE OF CSOM AS "*KARNASRAVA*"

Karnasrava, also termed as *Karnasansrava*[16], is derived from two Sanskrit components – *Karna* meaning the Ear, and Srava meaning the discharge, indicating a pathological condition characterized by ear discharge.

Table -2: CLASSICAL REFERENCES OF *KARNASRAVA* IN AYURVEDIC LITERATURE

SAMHITA	**REFERENCE**
Charak Samhita	*Chikitsasthana* – 26th chapter
Sushruta Samhita	*Uttartantra* – 20-21th chapter
Ashtang Hridaya	*Uttarsthana* 18th chapter (not mentioned as a separate disease)
Ashtang sangraha	*Uttarsthana* 22nd chapter (not mentioned as a separate disease)
Bhavprakash	*Madhyam khand* 64th chapter
Yogaratnakara	64th chapter (*karnarogadhikara*)
Vangsen Samhita	34th chapter (*Karnarogadhikara*)

Nidana

While *Acharya Charak* does not provide a separate enumeration of *nidanas* for *karnasrava*, *Acharya Sushruta* described *Siroabhighata*, *Nimajjatojale*, *Karna Prapaka* and *Karna Vidradhi* as the principal *nidanas* responsible for the manifestation of *Karnasrava*.[17]

शिरोऽभिघातादथवा निमज्जतो जले प्रपाकादथवाऽपि विद्रधेः । सु. उ. २०/१०॥

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Table – 3: *NIDANAS* OF *KARNASRAVA* AND THEIR PROBABLE CORRELATION WITH CSOM

***NIDANA* (AS PER *SUSHRUTA*)**	**CLASSICAL EXPLANATION**	**PROBABLE CORRELATION WITH ETIOLOGICAL FACTORS OF CSOM**
Siroabhighata	Any injury to the head	Any trauma to the head may lead to TM perforation [18] and thereby, causing CSOM.
Nimajjatojale	Immersion in water	Water (unsterile water) exposure promotes middle-ear infection through Eustachian tube dysfunction and direct entry via tympanic membrane perforation or micro-trauma. [19]
Karna Prapaka	Inflammation in ear	Persistent inflammation of middle ear cavity due to frequent URTI or poor hygiene leads to CSOM. [20]
Karna Vidradhi	Suppurative lesion or furuncle in ear	Localized suppuration may result in persistent infection and chronic middle ear discharge.

SAMPRAPTI

According to *Acharya Sushruta*, the *samprapti* of *Karṇasrava* is initiated by *Avaraṇa* of *Vata* by other *Doṣhas*, which acts as the primary pathogenic event. [21] With continued *Nidana sevana*, progressive *doṣha prakopa* ensues, wherein vitiated *Kapha* and *Pitta* combine with deranged *Vata*. This complex subsequently undergoes *Vimargagamana*, ascending toward the *urdhvajatru* region and localizing in the *karṇapradesha*. [22] The ensuing *Sthana sanshraya* leads to *duṣhṭi* of *rasa, rakta, and maṃsa dhatus* within the ear, ultimately manifesting as *Karṇasrava*. And thus, he mentioned "Puyasrava" i.e Pus discharge as the classical symptom of *karnasrava*.

Table: 4 *SAMPRAPTI*-BASED COMPARISON OF *KARNASRAVA* AND CSOM

SAMPRAPTI* OF *KARNASRAVA	**PROBABLE CORRELATION WITH PATHOGENESIS OF CSOM**
Recognized both as a symptom and an independent disease.	Independent disease of chronic inflammation in middle ear.
Avarana leading to deranged *Vata* dynamics.	Impaired middle ear ventilation initiating the inflammation.
Kapha-avrita Vata causing the *srava* and *kandu*	Persistent mucosal inflammation leading to ear discharge.
Appearance of *karnagata vrana*	Perforation of the Tympanic membrane.
Maintained by unresolved *Dosha*-imbalance	Maintained by ongoing infection and poor aeration.
Disturbance in the normal physiology of *Shrotendriya* i.e hearing.	Conductive hearing impairment

LAKSHANA

Acharya Charak has not described *karnasrava* as a distinct disease, however, he has elaborated various forms of ear discharge as clinical feature within the different types of *Karnarogas*. The nature of discharge varies according to the predominance of *dosha* (mentioned below in table no.5). [3] *Acharya Sushrut* has only mentioned the presence of "*puyasrava*" as the main and only clinical feature of *karnasrava*. [23]

Acharya Vagbhatt does not recognize *Karnasrava* as an independent disease, however, he provides more insight into its management. In *Ashtang Hridaya* (*Uttarasthana* 17), ear discharge is described as a sequela of *Karnashoola*, appearing after suppuration (Paka). [24]

In *Bhavaprakasha*, *Acharya Bhavamishra* characterizes *karnasrava* by the presence of *puya* or *Jala* discharge as its clinical manifestation. [25]

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Table 5: TYPES OF SRAVA IN KARNA ROGAS ACCORDING TO DIFFERENT ACHARYAS

ACHARYA	TYPE	TYPE OF *SRAVA*	CHARACTERISTICS
1. Charak	*Vataj karnaroga*	*Tanu Srava*	Thin, scanty discharge.
	Pittaj karnaroga	*Sapeet-puti Srava*	Yellow,foul-smelling discharge.
	Kaphaj karnaroga	*Shukla-snigdha Srava*	Thick, white discharge.
	Sannipataj karnaroga	*Mishrit Srava*	Combination of different types.
2. Sushrut	*karnasrava*	*Puyasrava*	Purulent ear discharge.
3. Vagbhatt	*Vataj Karnashool*	*Lasika-alpa Srava*	Thin, scanty discharge.
	Pittaj Karnashool	*Sapeeta lasika Srava*	Yellowish discharge
	Kaphaj Karnashool	*Shweta-Ghan Srava*	Thick and white discharge
	Raktaj Karnashool	*Rakta srava*	Blood-stained discharge
	Sannipataj Karnashool	*Sitasitaraktaghanapuya srava*	Mixed discharge
4. Bhavaprakash	*Karnasrava*	*Puya/Jala Srava*	Purulent or watery discharge
5. Yogaratnakar	*Karnasrava*	*Sraveddhi puyam*	Purulent discharge

All the *acharyas* have described *Putikarna*, a condition characterized by foul smelling ear discharge, where the term "*Puti*" denotes the putrefaction and offensive odour.

अवेदनो वाऽप्यथवा सवेदनो घनं स्रवेत् पूति च पूतिकर्णकः | सु० उ०-20/16|

i.e, *Putikarna* may present either with or without pain and is characterized by the thick, foul-smelling discharge from the ear. While *karnasrava* broadly signifies the presence of ear discharge, *Putikarna* highlights its qualitative severity often indicating chronicity and underlying tissue involvement. This conceptual distinction finds a close parallel in modern otology, where the foul-smelling otorrhea observed in the Squamosal type of CSOM is often associated with cholesteatoma, necrotic debris and persistent infection.

CONVENTIONAL MANAGEMENT OF *KARNASRAVA*

Acharya Sushruta emphasized *Nidana parivarjana* as the foundational strategy in disease management, prioritizing prevention over intervention. [23] He recognized that continued *Nidana Sevana* undermines the efficacy of all subsequent treatments, whereas reducing exposure to causative agents limits burden and recurrence. Many conventional therapeutic modalities are further described indicated for *Karnasrava*, *Putikarna* and *Krimikarna* focusing on *Dosha* regulation, control of discharge and restoration of ear function [26].

कर्णस्रावे पूतिकर्णे तथैव कृमिकर्णके समानं कर्म कुर्वीत योगान् वैशेषिकानापि।
शिरोविरेचनश्चैव धूपनं पूरणं तथा प्रमार्जनं धावन वीक्ष्य वीक्षयावचार्येत् ॥ सु० उ०-21/39-40

1. *Shirovirechana*
2. *Pramarjana*
3. *Dhavana*
4. *Dhoopana*
5. *Poorana*
6. *Pichu (mentioned by Acharya Vagbhatt)*

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Table 6: INTEGRATIVE COMPARISON OF AYURVEDIC MANAGEMENT OF *KARNASRAVA* AND MODERN CSOM MANAGEMENT

AYURVEDIC PROCEDURE	THERAPEUTIC ACTION	CORRELATION WITH CSOM	SHARED THERAPEUTIC PRINCIPLE
Shirovirechana	Promotes clearance of vitiated *Doshas* from the head. [27]	Treating the nasopharyngeal pathology	Improves eustachian tube patency and middle ear aeration by reducing URTI [28]
Pramarjana	Cleaning the EAC to clear the discharge	Dry mopping	Maintenance of a dry ear.
Dhavana/ Prakshalana	Aural irrigation with water or antiseptic/antimicrobial decoctions.	Aural toileting	Mechanical cleansing removes discharge, reduces inflammation and enhances the effectiveness of topical therapeutic agents. [29]
Dhoopana	Helps in drying the *srava* by its *ruksha* and *krimighna* property. [30]	-	-
Poorana (Karnapoorana)	Induces *Vata shamana*, the key pathogenic factor in *karnasrava*.	Use of Antibiotic & anti-inflammatory ear drops	Localized drug delivery to control the infection and promoting healing.
Karnapichu	Provides *snehana* (unctuous effect), *shamana* of *vata*, promotes *Ropana* (healing) and *shodhana* of local tissue for a longer duration of time.	Comparable to topical medicated ear wick/packing with antibiotics and antiseptic agents.	Ensures sustained local drug delivery, maintains prolonged contact of medication with diseased mucosa aids in infection control and mucosal healing.

CONCLUSION

Thus, shared etiological factors, pathogenetic mechanisms, clinical features and treatment principles of CSOM with *Karnasrava* suggest a meaningful correlation between the two entities. While placing primary emphasis on *Nidana parivarjana*, integrating these two approaches may support a holistic strategy for disease prevention and management. Furthermore, based on the above observations, *Karnasrava* can be closely correlated with the Mucosal (tubo-tympanic) type of CSOM whereas *Putikarna* shows a stronger resemblance to the Squamosal (attico-antral) type of CSOM.

REFERENCES

1. *Agnivesha, Charaka Samhita, Revised by Charaka and Dridhabala, Ayurveda Dipika Commentary of Chakrapani Datta, Edited by Vaidya Jadavji Trikamji Acharya, Chowkhamba Krishnadas Academy, Varanasi, Reprint-2010, Sutra Sthana, 8th Chapter, Verse-3, pp -738, pg -55.*
2. *Sushrutha Samhita, with Sri Dalhanacharya Teeka, edited by Narayan Ram Acharya Kavyathirtha, Chaukhambha Orientalia, Varanasi, reprint edition-2009, Uttara tantra, 20th chapter, Verse-7(2), pp-824, pg-539.*
3. *Agnivesha, Charaka Samhita, Revised by Charaka and Dridhabala, Ayurveda Dipika Commentary of Chakrapani Datta, Edited by Vaidya Jadavji Trikamji Acharya, Chowkhamba Krishnadas Academy, Varanasi, Reprint-2010, Chikitsasthana,26th Chapter, Verse- 127.*
4. *Ashtanga Hridaya with commentaries Sarvangasundari of Arunadatta and Ayurvedarasayana of Hemadri, An-notated by Dr Anna Moreswar Kunte and Krishna Ramachandra Shastri Narre, edited by Pt. Hari Sadasiva Sastri, Chaukhamba Surabharati Prakasan, Varanasi, Edition 2008, Uttaratantra, 17th chapter, verse-42, pp-956, pg-735.*
5. *Mohan Bansal Disease of Ear, Nose & Throat. First edition: 2013, Jaypee brothers Medical Publishers (P) LTD; Chapter 19, p.208.*
6. *WHO/CIBA Foundation Workshop. Prevention of Hearing Impairment from Chronic Otitis Media. CIBA Foundation, London, UK. 1996.*
7. *https://www.ncbi.nlm.nih.gov/books/NBK554592/*
8. *WHO/CIBA Foundation Workshop. Prevention of Hearing Impairment from Chronic Otitis Media. CIBA Foundation, London, UK. 1996 Available*

a. *from: http://WHO_PDH_98.4.pdf.*

9. *Couzos S, Lea T, Mueller R, Murray R, Culbong M. Effectiveness of ototopical antibiotics for chronic suppurative otitis media in Aboriginal children: a community-based, multicentre, double-blind randomised controlled trial. Med J Aust. 2003;179(4):185-190.*
10. *Dhingra PL, Dhingra S. Diseases of Ear, Nose and Throat. 7th ed. New Delhi: Elsevier; 2018. p. 68–72.*
11. *Bansal M. Diseases of Ear, Nose and Throat. 3rd ed. New Delhi: Jaypee Brothers Medical Publishers; 2018. p. 92–94.*

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EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 4 | April 2026 - Peer Reviewed Journal

12. *Browning GG, Merchant SN, Kelly G, Swan IR, Canter R, McKerrow WS. Chronic otitis media. In: Gleeson M, editor. Scott-Brown's Otorhinolaryngology, Head and Neck Surgery. 7th ed. London: Hodder Arnold; 2008. p. 936*
13. *https://pmc.ncbi.nlm.nih.gov/articles/PMC10505739/#REF3*
14. *Bansal M. Chronic suppurative otitis media and cholesteatoma. In: Diseases of Ear, Nose and Throat. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; 2015. p. 233.*
15. *Leach AJ. Otitis media in Australian Aboriginal children: an overview. International Journal of Pediatric Otorhinolaryngology. 1999; 49; S173-8.*
16. *Shastri, Ambikadutta (2011). Sushruta Samhita. Part-2. Reprint Edition. Varanasi, India: Chaukhambha Sanskrita Sansthan. Su. Utt. 20/10, pg.117.*
17. *Kaviraja Ambikadutta Shastri; Sushruta Samhita of Maharsi Susruta with the Ayurveda tattvaSandipika hindi Commentary; Chaukhambha Sanskrit Sansthan Varanasi, reprint 2010; Uttartantra20/10, pg. No. 117.*
18. *https://www.ncbi.nlm.nih.gov/books/NBK557887/*
19. *Young I, Sanchez JJ, Desta BN, Heasley C, Tustin J. Recreational water exposures and illness outcomes at a freshwater beach in Toronto, Canada: A prospective cohort pilot study. PLoS One. 2023;18(6 June):1-17. doi: 10.1371/journal.pone.0286584*
20. *https://pmc.ncbi.nlm.nih.gov/articles/PMC3412293/*
21. *Sushruta. Sushruta Samhita, Uttaratantra. Shastri AD, editor. Ayurvedtatvasandeepika Hindi commentary. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2012. Su.U.20/2. p.112 [Crossref][PubMed][Google Scholar]*
22. *Sushruta. Sushruta Samhita, Uttaratantra. Shastri AD, editor. Ayurvedtatvasandeepika Hindi commentary. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2012. Su .Utt. 21/16. p.128 [Crossref][PubMed][Google Scholar].*
23. *Shastri, Ambikadutta (2011). Sushruta Samhita. Part-2. Reprint Edition. Varanasi, India: Chaukhambha Sanskrita Sansthan. Su. Utt. 1/25, pg.14.*
24. *Ashtanga Hridaya with commentaries Sarvangasundari of Arunadatta and Ayurvedarasayana of Hemadri, An-notated by Dr Anna Moreswar Kunte and Krishna Ra-machandra Shastri Narre, edited by Pt. Hari Sadasiva Sastri, Chaukhamba Surabharati Prakasan, Varanasi, Edition 2008, Uttaratantra, 17th chapter, verse-1-8.*
25. *Bhavamishra. Bhavaprakasha. Madhyama Khanda, Chapter 64 (Karnaroga Adhikara), Verse 10. Varanasi: Chaukhambha Sanskrit Bhawan; p. 670.*
26. *Shastri, Ambikadutta (2011). Sushruta Samhita. Part-2. Reprint Edition. Varanasi, India: Chaukhambha Sanskrita Sansthan. Su. Utt. 21/40, pg.150.*
27. *Tripathi B, editor. Ashtanga Hridyam, Sutra sthan chapter 20, verse 1, Chaukhamba Sanskrit Pratishthan, Delhi, 2009; 244.*
28. *Patel SS, Zala TJ, Sekhaliya SM, Aghera A, Chhaya B. Role of Nasya followed by Karnapramarjana and Karnadhoopana in the management of Karnasrava (CSOM): A single case study. World J Pharm Med Res. 2022;8(3):273–276.*
29. *https://pmc.ncbi.nlm.nih.gov/articles/PMC8095014/*
30. *Chaudhari S, Sharma A. Chronic suppurative otitis media correlated with Karṇasrava: Ayurvedic interventions using dhūpana and karṇapicchu. J Ayurveda Integr Med Sci. 2025;10(3):64. doi:10.21760/jaims.10.3.64.*