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Ayurvedic Management of Chronic Refractory Otitis Externa – A Case Report

Authors:

Keshav Vijay Kale[1], Gimi M. Geo[2], Musafar Ahammed[3], Mayuri J. S[4], Jinu Jojan[5], Nimisha A. P[6]

Affiliations:

[1] Junior Resident, Department of Shalakya Tantra, Government Ayurveda College, Trivandrum. Email: *kieshvkale@gmail.com*

[2] Assistant Professor, Department of Shalakya Tantra, Government Ayurveda College, Trivandrum. Email: *gimimgeo21@gmail.com*

* Junior Resident, Department of Shalakya Tantra, Government Ayurveda College, Trivandrum. Email: *musafarmarayi2016@gmail.com*

[4] Junior Resident, Department of Shalakya Tantra, Government Ayurveda College, Trivandrum. Email: *karthikaunnimayu@gmail.com*

[5] Junior Resident, Department of Shalakya Tantra, Government Ayurveda College, Trivandrum. Email: *jinujojan46@gmail.com*

* Junior Resident, Department of Shalakya Tantra, Government Ayurveda College, Trivandrum. Email: *nimishasuresh01997@gmail.com*

Corresponding Author:
Dr. Keshav Vijay Kale
Junior Resident,
Department of Shalakya Tantra,
Government Ayurveda College, Trivandrum, Kerala, India.

Abstract

Otitis externa is a common inflammatory condition of the external auditory canal, often presenting with pain, discharge, itching, and swelling. While most cases respond well to topical and systemic antibiotics, treatment-resistant forms remain a significant therapeutic challenge.

This case report describes a 14-year-old male with chronic otitis externa persisting for two months, unresponsive to multiple courses of oral, intravenous, and topical antibiotics. The patient was treated with Ayurvedic internal medications, including Punarnavadi Kashayam and STEP capsule, for a period of seven days.

Marked improvement was observed within three days, and complete resolution of pain, itching, and discharge was achieved by day seven.

This case highlights the efficacy and safety of Ayurvedic management in refractory otitis externa,

offering a promising integrative approach for cases unresponsive to conventional therapy.

Keywords: Otitis externa, Karna Srava, Punarnavadi Kashayam, STEP capsule, Ayurveda, refractory ear infection

Introduction

Otitis externa (OE), commonly referred to as "swimmer's ear," is an infection and inflammation of the external auditory canal (EAC), most frequently caused by *Pseudomonas aeruginosa* and *Staphylococcus aureus* [1,2].
Clinically, it is characterized by otalgia, otorrhea, itching, canal edema, and occasionally conductive hearing loss.
Predisposing factors include repeated water exposure, humid environments, use of earphones or hearing aids, and mechanical trauma from cotton buds or foreign objects [3,4].

While topical antibiotics, with or without corticosteroids, remain the standard therapeutic approach, certain cases exhibit incomplete response or recurrence.
Rising antimicrobial resistance, frequent relapses, and side effects associated with prolonged topical or systemic therapy pose significant challenges in management [5,G].

From an Ayurvedic perspective, otitis externa can be correlated with Karna Shoola (ear pain) and Karna Srava (ear discharge), conditions arising from Kapha-Pitta vitiation in the Karnashrota (auditory passage) [7,8].
Ayurvedic texts emphasize cleansing procedures (Pramarjana) and Kapha-Pitta pacifying internal medications for symptomatic relief, tissue healing, and prevention of recurrence [U,10].

This case report describes the successful Ayurvedic management of a 14-year-old male with chronic refractory otitis externa, who achieved complete symptomatic resolution within seven days of treatment.

Patient Information

The patient was a 14-year-old male who presented with complaints of severe right ear pain, persistent purulent discharge, itching, and reduced hearing for the past two months. He had undergone multiple courses of oral and intravenous antibiotics, along with topical ear drops, but reported no significant relief. There were no systemic symptoms such as fever, vertigo, or lymphadenopathy. His past medical history was unremarkable, with no known comorbidities.

Findings

General & Systemic Examination

On general examination, the patient was found to be well-nourished, and his vital signs were within normal limits. There was no evidence of pallor, lymphadenopathy, or any systemic abnormality on physical assessment.

Clinical Examination of Ear

Examination	Right Ear Findings	Left Ear Findings
External ear & pinna	Normal shape, mild tenderness present	Normal
EAC	Swollen, erythematous, purulent discharge	Normal

Otoscopy	Tympanic membrane intact, partially visualized	Normal
Tragal pressure/auricle tug	Marked tenderness	No tenderness
Mastoid	Non-tender	Non-tender

Investigations

- Routine blood reports (CBC, ESR, CRP, etc.) often remain within normal limits.
- No systemic involvement detected

Therapeutic Intervention

Internal Medicines

Medicine	Dosage & Schedule	Action
Punarnavadi Kashayam	U0 ml with warm water, twice daily before food	Shothahara, Kapha-Pitta shamaka
STEP capsule	1 capsule twice daily after food	Rasayana, immune-modulatory

-Dietary and Lifestyle Advice :

The patient was advised to avoid oily, fried, and cold foods that could aggravate *Kapha* and *Pitta dosha*. He was also instructed to keep the ear dry, avoid exposure to water or moisture, and refrain from scratching or inserting any objects into the ear canal to prevent local irritation and reinfection.

Table: Punarnavadi Kashayam – Ingredients and Properties

Ingredient (Dravya)	Properties (Ayurvedic + Modern)
Punarnava (Boerhavia diffusa)	Shothahara, Mutrala, Tridoshahara; diuretic, anti-inflammatory, hepatoprotective, anti-edematous

Haridra (Curcuma longa)	Kapha-Pitta shamaka, Krimighna, Shothahara; antimicrobial, antioxidant, anti-inflammatory, hepatoprotective
Daruharidra (Berberis aristata)	Pitta-Kapha shamaka, Raktashodhaka, Netrya; antibacterial, hypoglycemic, hepatoprotective
Guduchi (Tinospora cordifolia)	Tridoshahara, Rasayana, Jvaraghna; immunomodulator, antipyretic, antioxidant, hepatoprotective
Patola (Trichosanthes dioica)	Kapha-Pitta shamaka, Jvaraghna; anthelmintic, hepatoprotective, anti-inflammatory
Chitraka (Plumbago zeylanica)	Deepana, Kapha-Vata shamaka; digestive stimulant, carminative, anti-inflammatory
Nimba (Azadirachta indica)	Kapha-Pitta shamaka, Krimighna, Raktashodhaka; antibacterial, antifungal, anti-inflammatory, hepatoprotective
Vasa (Adhatoda vasica)	Kapha-Pitta shamaka, Kasaghna; expectorant, bronchodilator, antimicrobial, anti-inflammatory
Patha (Cissampelos pareira)	Kapha-Pitta shamaka, Shothahara; antimicrobial, hepatoprotective, anti-inflammatory

Devadaru (Cedrus deodara)	Kapha-Vata shamaka, Shothahara; anti-inflammatory, analgesic, antimicrobial
Gokshura (Tribulus terrestris)	Mutrala, Balya; diuretic, nephroprotective, antihypertensive, aphrodisiac

Table: Ingredients of STEP Capsule and Their Ayurvedic Properties

Ingredient (Dravya)	Properties (Ayurvedic + Modern)
Yashtimadhu (Glycyrrhiza glabra)	Madhura rasa, Kapha-Pitta shamaka, Rasayana, Shothahara; demulcent, anti-inflammatory, hepatoprotective, immune-supportive
Guduchi (Tinospora cordifolia)	Tridoshahara, Rasayana, Jvaraghna; immunomodulator, antioxidant, hepatoprotective, antipyretic
Kantakari (Solanum xanthocarpum)	Kapha-Vata shamaka, Kasahara, Shwasahara; bronchodilator, expectorant, antimicrobial
Tulasi (Ocimum sanctum)	Kapha-Vata shamaka, Krimighna, Shwasahara; antimicrobial, adaptogenic, antioxidant
Bharangi (Clerodendrum serratum)	Kapha-Pitta shamaka, Kasahara, Shothahara; anti-inflammatory, bronchodilator, antimicrobial
Triphala (Amalaki, Haritaki, Bibhitaki)	Tridoshahara, Rasayana, Agnideepana; antioxidant, laxative, anti-inflammatory, immune-supportive

Trikatu (Sunthi, Maricha, Pippali)	Deepana, Kapha-Vata shamaka; carminative, bioavailability enhancer, anti-inflammatory
Guggulu (Commiphora mukul)	Kapha-Vata shamaka, Shothahara, Lekhana; anti-inflammatory, hypolipidemic, antimicrobial
Parijata (Nyctanthes arbor-tristis)	Kapha-Pitta shamaka, Jvaraghna, Shothahara; antipyretic, anti-inflammatory, antimicrobial
Gandhaka Rasayana	Rasayana, Krimighna, Twachya; antimicrobial, immunomodulatory, rejuvenative
Godanti Bhasma	Pitta shamaka, Jvaraghna,

	Shothahara; antipyretic, anti-inflammatory, calcium source
Swarnamakshika Bhasma	Rasayana, Balya, Ojovardhana; adaptogen, immunomodulator, hematinic
Kasis Bhasma	Raktaprasadaka, Pittashamaka, Agnideepana; hematinic, liver supportive
Nigella sativa (Kalonji)	Kapha-Vata shamaka, Krimighna; antimicrobial, antioxidant, anti-inflammatory
Haridra (Curcuma longa)	Kapha-Pitta shamaka, Krimighna, Shothahara; antimicrobial, antioxidant, anti-inflammatory
Anantmool (Hemidesmus indicus)	Pitta-Kapha shamaka, Raktashodhaka, Rasayana; blood purifier, hepatoprotective, anti-inflammatory

Results

Table and Figure Legends

Table 1. Clinical assessment of symptom severity before and after Ayurvedic intervention.

The table shows the objective evaluation of major clinical features — pain, itching, discharge, erythema, and edema — in a 14-year-old boy diagnosed with chronic otitis externa.
Symptom severity was recorded using the Visual Analog Scale (VAS, 0–10) for pain and itching, and a 4-point clinical grading (0 = none, 1 = mild, 2 = moderate, 3 = severe) for discharge, erythema, and edema.
Marked improvement was observed in all parameters after one week of treatment with Punarnavādi Kaṣāyam and STEP capsule.

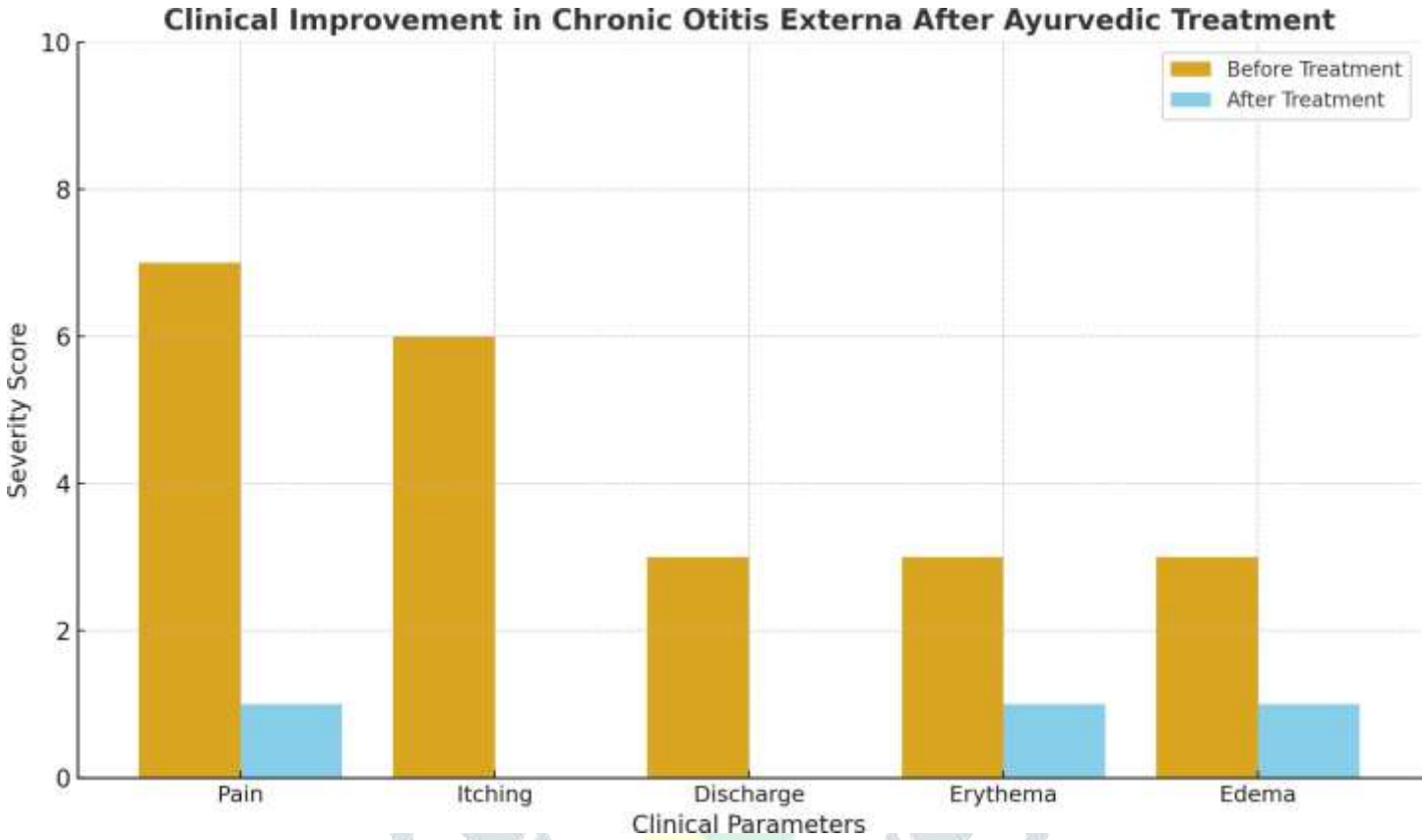
Follow-Up and Results

Parameter	Scale Used	Before Treatment	After 1 Week	Improvement (%)
Pain	VAS (0–10)	7	1	85.7% ↓
Itching	VAS (0–10)	G	0	100% ↓
Discharge	Clinical grade (0–3)	3 (Profuse)	0 (None)	100% ↓
Canal erythema	Clinical grade (0–3)	3 (Severe)	1 (Mild)	GG.G% ↓
Canal edema	Clinical grade (0–3)	3 (Severe)	1 (Mild)	GG.G% ↓
Tympanic membrane visibility	Visible: No / Partial / Full	Partial	Full	—
Hearing (Tuning fork test)	Qualitative	Mild conductive loss	Normal	—

Figure 1. Comparative symptom severity before and after Ayurvedic treatment.

Bar graph illustrating the improvement in pain, itching, discharge, erythema, and edema following one week of Ayurvedic therapy.
The blue bars represent baseline (before treatment) severity, while the green bars indicate

post-treatment values.
The figure clearly depicts a significant reduction in all assessed clinical parameters.



Outcome and Follow-Up

After one week of Ayurvedic management, the patient reported marked improvement in ear pain and itching, with complete cessation of discharge. On repeat otoscopic examination, erythema and edema were significantly reduced, and the external auditory canal appeared healthy with a clearly visible tympanic membrane. The Visual Analogue Scale (VAS) score for pain decreased from 7 to 1, and itching from C to 0. No recurrence was observed during a two-week follow-up period. These findings indicate effective symptomatic relief and sustained canal healing without relapse.

Discussion

This case highlights the potential of Ayurvedic formulations in managing chronic inflammatory conditions of the ear such as *otitis externa*. Punarnavādi Kaṣāyam, a classical polyherbal decoction from *Sahasrayogam* 【1】, is well-known for its *śothahara* (anti-inflammatory), *mutrala* (diuretic), and *kapha-pittahara* (dosha-balancing) actions. The combination of *Punarnava, Daruharidra, Guduchi,* and *Haridra* provides anti-inflammatory, antimicrobial, and decongestant properties, which aid in reducing *śotha* (swelling) and *srāva* (discharge)【2–4】.

The STEP capsule, a proprietary *rasayana* formulation containing *Guduchi, Yashtimadhu, Tulasi, Bharangi, Guggulu, Gandhaka Rasayana* and mineral *bhasmas*, augments immune defense, acts as a *krimighna* (antimicrobial), and supports *ojas vardhana* (immune vitality)【5,G】. Its *deepana- pachana* (digestive and metabolic corrective) properties may help in removing *āma* (toxins), while its *rasayana* effect aids systemic rejuvenation. Together, these formulations promoted canal cleansing, tissue repair, and long-term

prevention of recurrence.

While conventional antibiotics primarily target bacterial infections, chronic or recurrent otitis externa often involves mixed flora, biofilm formation, or hypersensitivity reactions, leading to poor response to repeated antibiotic therapy【7,8】. Ayurvedic treatment likely exerted its effect through dosha-shamana (balancing of Kapha and Pitta), śothahara (anti-inflammatory), and rasayana (immune-enhancing) mechanisms, thereby addressing both local pathology and systemic imbalance. This integrative approach provided lasting relief without adverse effects, emphasizing the therapeutic scope of Ayurveda in chronic ear conditions【U–11】.

Conclusion

The present case demonstrates that Ayurvedic management with Punarnavādi Kaṣāyam and STEP capsule can offer effective symptomatic relief in chronic, antibiotic-refractory otitis externa. The holistic combination of internal *rasayana* therapy measures not only resolved acute symptoms but also prevented recurrence. Such integrative, evidence-based Ayurvedic interventions may serve as safe and sustainable alternatives in the management of recurrent external ear infections【12】.

Informed Consent

Written informed consent was obtained from the patient's guardian prior to the initiation of treatment as well as for the publication of this case report. All ethical principles were adhered to, and the patient's identity has been strictly protected to ensure anonymity.

Patient's Perspective

At the time of presentation, the patient was visibly distressed due to persistent thick ear discharge, a sense of fullness, and discomfort in the ear, which had developed following frequent swimming. Despite receiving multiple courses of conventional treatment, his condition did not improve, leading to frustration and anxiety. After initiating the Ayurvedic regimen consisting of Punarnavadi Kashayam and STEP capsule, he gradually noticed a steady reduction in pain, itching, and discharge during follow-up visits. By the end of one week, he reported complete relief from all symptoms and expressed satisfaction and confidence in the Ayurvedic approach. He also mentioned that he was able to resume his normal daily activities comfortably, appreciating the absence of recurrence after treatment.

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