

RAPID HEALING OF TRAUMATIC TYMPANIC MEMBRANE PERFORATION THROUGH AYURVEDIC MANAGEMENT: A CASE REPORT

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ABSTRACT

Background: Traumatic tympanic membrane (TM) perforation commonly heals spontaneously within 2–6 weeks. Ayurveda describes ear trauma under *Karnagata Abhighata*, where *Vranaropana* and *Vata-Pitta Shamana* therapies play an essential role in promoting rapid tissue healing. This case highlights unusually fast healing of a TM perforation following Ayurvedic management. **Aim:** To assess the rapid healing of a traumatic TM perforation using Ayurvedic treatment modalities. **Case Presentation:** A 38-year-old female presented with acute left ear pain and mild hearing loss following accidental ear trauma with a ear bud. Otoscopic examination revealed a small central TM perforation without discharge. Ayurvedic assessment suggested *Karnagata Abhighata* with *Vata-Pitta* predominance. **Intervention:** The patient was treated with lukewarm *Panchendriya wardhan Taila Nasya*, and internal medications *Aarogyawardhini vati*, *Lakshmivilas ras*, *Kamdudha ras*, *Avipittakar churna* for 14 days. Ear-dry precautions were advised. **Results:** On Day 14, otoscopic evaluation revealed **complete closure of the TM perforation**, restoration of normal TM landmarks, and resolution of symptoms. Healing occurred significantly faster than typical spontaneous recovery times. **Conclusion:** This case demonstrates the potential effectiveness of Ayurvedic management—including *Nasya*, and *Shamana* medicines—in accelerating the healing of traumatic TM perforations. Ayurvedic interventions aimed at *Vranaropana*, *Shothahara*, and *Vata-Pitta Shamana* may play a vital role in achieving rapid tissue regeneration. Further clinical studies are warranted to validate these findings.

KEYWORDS: *Nasya*, *panchenderiwardhan taila*, TM perforation, *Aarogyawardhini vati*.

INTRODUCTION

Tympanic membrane (TM) perforation is a frequently encountered clinical condition in otolaryngology, commonly resulting from trauma, infection, or barotrauma. Traumatic perforations in particular often occur due to accidental instrumentation of the external auditory canal, slap injuries, or sudden pressure changes. The natural healing process of the TM generally requires 2–6 weeks, depending on the size and location of the perforation, infection status, and patient compliance. Although spontaneous healing is common, delayed closure and secondary infections may prolong morbidity and necessitate surgical intervention.

Ayurveda offers a unique perspective on ear disorders under the broad category of *Karna Roga*. Traumatic perforations can be correlated with *Karnagata Abhighata*, wherein vitiation of *Vata*—the principal dosha governing sensory organs and nerve function—leads to symptoms such as *Karna Shoola* (ear pain), *Badhira* (hearing impairment), and disruption of the delicate structures of the ear. Classical Ayurvedic texts emphasize therapeutic approaches aimed at *Vata-Pitta Shamana*, *Vranaropana* (tissue healing), and *Shothahara* (anti-inflammatory) actions for managing trauma-related conditions.

Procedures such as *Karna Nasya* are described as highly beneficial for disorders of the head and neck region (*UrdhwajatrugataVikara*), supporting improved vascularity, soothing inflammation, and accelerating epithelial regeneration. Internal medicines with *Ropana*, *Balya*, and *Vatanulomana* properties further enhance healing.

This case report presents an instance of exceptionally rapid healing of a traumatic TM perforation—achieved within four days—highlighting the potential efficacy of Ayurvedic treatments in facilitating tissue repair and improving clinical outcomes in otologic trauma.

Case Presentation

A 43-year-old female presented to the outpatient department with a sudden onset of left ear pain and reduced hearing following accidental trauma while cleaning the ear with ear bud. The patient reported an immediate sharp pain accompanied by a sensation of blockage in the ear. There was no history of bleeding, discharge, vertigo, tinnitus, previous ear disease, or systemic illness.

Clinical Examination

BP – 120/90mmhg

P – 80/min

Otoscopic examination:

Rt ear – TM intact EAC normal

Lt ear – TM central perforation with mild congestion, EAC – Mild congestion margins appeared clean, and no signs of active infection or granulation were present. The external auditory canal was normal.

Rinees'test – Rt ear: AC > BC Lt ear: AC > BC

Webers'test – Lateralization to left ear

Ayurvedic Assessment

According to Ayurvedic evaluation, the condition correlated with **Karnagata Abhigata**, characterized by *Karna Shoola* (ear pain), *Badharya* (hearing impairment), and disruption in *Vata*-dominated structures. Vitiating of **Vata-Pitta dosha** was considered due to sudden trauma (*Abhigata*) and localized inflammation.

Interventions

Table 1: Internal ayurvedic drugs with their possible effects.

Sr.no.	Drug name	Dose	Days	Effects
1.	Aarogyawardhini vati	250mg 2TDS (after food)	14days	Improves metabolism & supports tissue healing
2.	Lakshmvilas ras	250mg 2TDS(after food)	14days	Reduces inflammation & ear pain (Vata-Kapha shaman)
3.	Kamdudha ras	250mg 2TDS(after food)	14days	Pitta shaman & anti-inflammatory
4.	Avipittakar churn	1tsf with lukewarm water , HS	14days	Pitta anulim Agni regulation
5.	Sukshma Triphala	250mg 2TDS(after food)	14days	Rasayan Promotes wound healing (Vranaropan)

Table 2: Kriyakalpa with their possible effects.

Sr.no	Drug name	Dose	Days	Effects
1.	Nasya with Panchendriyawardhan Taila	8 drops in each nostrils ,OD	14 days	Vata-Pitta and enhance local healing

Table 3: Case Timeline & Event.

Days	Clinical findings
Day 1	Ear pain & reduced hearing present. Otoscopy showed small central TM perforation with clean margins.
Day 3	Significant reduction in ear pain & discomfort. No discharge or inflammation
Day 7	Healing improved. Otoscopy showed reduction of TM perforation with healthy epithelial migration. Healing improved.
Day 14	Completely healing of tympanic membrane with normal cone of light. Symptoms fully resolved.

RESULT

The patient showed a progressive and sustained clinical improvement following Ayurvedic management. On Day 3, there was a marked reduction in ear pain and discomfort, with no development of ear discharge or signs of infection. By Day 7, the patient reported significant improvement in hearing, and otoscopic examination

revealed a noticeable reduction in the size of the tympanic membrane perforation with healthy epithelial migration from the margins.

On Day 14, otoscopic evaluation demonstrated complete closure of the tympanic membrane perforation, restoration of normal tympanic membrane landmarks, and reappearance of the cone of light. All presenting symptoms, including ear pain and hearing difficulty, were completely resolved. No complications such as infection, discharge, or worsening of hearing were observed during the follow-up period.

The healing occurred earlier than the usual spontaneous healing period of 2–6 weeks reported for traumatic tympanic membrane perforations, suggesting a beneficial role of the Ayurvedic interventions in promoting rapid tissue repair and symptomatic relief.

Images of TM Perforation

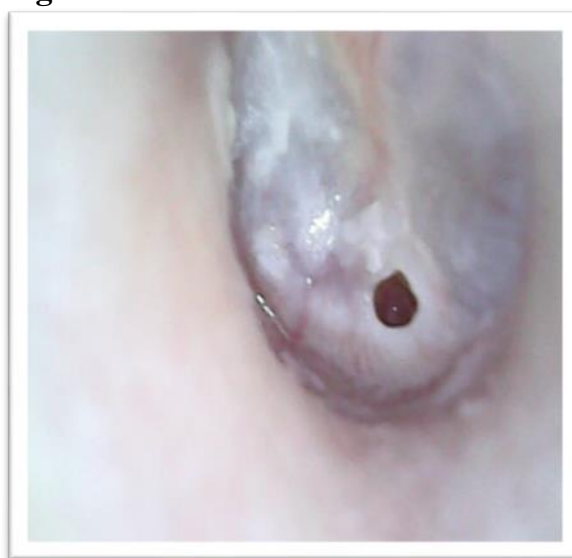


Fig: 1 Before treatment



Fig 2: After treatment

CONCLUSION

This case demonstrates that Ayurvedic management can effectively support healing in traumatic tympanic membrane perforation. The integrated use of *Nasya*, and internal Ayurvedic formulations—particularly **Kamdudha Rasa**, **AvipattikarChurna**, **SookshmaTriphala**, and **Lakshmivilas Rasa**—resulted in complete closure of the TM perforation within 14 days, along with rapid symptom resolution and restoration of auditory function. The results highlight the significance of *Vata-Pitta Shamana*, *Vranaropana*, and *Shothahara* therapies in ear trauma. Although the findings are encouraging, larger clinical studies are needed to validate the reproducibility and efficacy of this approach. Nevertheless, this case underscores the potential of Ayurveda as a safe, non-invasive, and effective treatment option for managing acute TM perforations.

DISCUSSION

Traumatic tympanic membrane perforation is commonly caused by direct injury to the ear and usually presents with ear pain and temporary conductive hearing loss. Small

central perforations generally heal spontaneously; however, the healing period may extend up to 2–6 weeks, and improper care may lead to delayed closure or infection.

In the present case, the condition was correlated with *Karnagata Abhighata*, characterized by *Vata–Pitta* vitiation due to trauma. The treatment approach aimed at *Vata–Pitta Shamana*, *Shothahara* (anti-inflammatory action), *Vedanasthapana* (analgesic effect), and *Vrana Ropana* (wound healing).

Nasya with *Panchendriyawardhan Taila* was administered to balance Doshas in the *Urdhva Jatrugata* region. *Tridosha Panchendriyawardhan Taila-shamaka*, anti-inflammatory, and tissue-nourishing effects, which support healing of ENT structures and prevent secondary complications.

Internal medications were prescribed to support systemic healing. Guggulu-based formulations provide *Shothahara* and *Vedanasthapana* actions, reducing inflammation and pain. *Rasayana* and *Ropana* drugs enhance tissue repair, improve microcirculation, and strengthen local immunity, thereby facilitating faster closure of the tympanic membrane.

Clinical improvement was evident by Day 3, with marked reduction in ear pain, indicating effective *Vata–Pitta* pacification. By Day 7, improvement in hearing and reduction in perforation size suggested active epithelial migration. Complete healing of the tympanic membrane by Day 14, with restoration of normal landmarks and cone of light, indicates accelerated healing compared to the usual natural course.

The absence of ear discharge, infection, or worsening of hearing highlights the safety and efficacy of the Ayurvedic treatment protocol. Early intervention, proper ear-dry precautions, and the combined local and systemic therapeutic approach contributed significantly to the favorable outcome

- **Panchendriyavardhan Tai Nasya**

Vata-shamaka, analgesic, anti-inflammatory, wound-healing

- **Internal medicines:**

Shothahara, Vedanasthapana, Rasayana, Vrana Ropana

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