

## Ayurvedic Management of *Baadhirya* : A Clinical Case Study on Age-Related Hearing Loss

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### Abstract

Aging is a natural process in which an organism undergoes structural and functional changes over time, leading to a gradual decline from its peak physiological performance. It acts as a biological clock for the human body. Among the various socio-medical challenges associated with aging, presbycusis is a hidden disability characterized by hearing impairment in elderly individuals. Hearing loss in older adults is a significant concern, as it can affect their ability to hear alarms, doorbells, or engage in conversations, leading to frustration, isolation, and depression. It is the third most common chronic condition in the elderly, following arthritis and hypertension. Hearing impairment can often be managed with the help of hearing aids. However, their effectiveness varies from person to person due to factors such as improper selection, incorrect amplification settings, or poor customization. In Ayurveda, this condition is classified under ear disorders as *Karnabaadhirya*. One of the key therapeutic interventions described in classical texts is *Karnapurana*—the instillation of medicated oil into the external auditory canal, which is beneficial in ear-related ailments. This paper presents a case report of a 65-year-old male patient who experienced diminished hearing and tinnitus in both ears, highlighting the Ayurvedic approach to managing such conditions.

**Key words :** *Bilwa taila, Baadhirya, karnapurana, presbycusis.*

**H**earing impairment is a significant public health concern, affecting over 278 million individuals globally. In India, approximately 63 million people (6.3% of the population) experience significant auditory impairment. The prevalence of presbycusis,

or age-related hearing loss, increases with age: 25–40% among those aged 65 years, 40–66% in individuals over 75, and more than 80% in those older than 85. Risk factors for presbycusis include systemic conditions such as diabetes mellitus and hypertension, genetic predisposition,

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and lifestyle habits that damage the inner ear. Chronic conditions like uncontrolled hypertension and diabetes can lead to arteriosclerosis, reducing blood flow to the cochlea and accelerating hearing loss. Despite its high prevalence, age-related deafness has not received adequate attention, leading to significant social, emotional, and cognitive consequences. Untreated presbycusis is associated with isolation, depression, and an increased risk of cognitive decline and dementia.

In Ayurveda, presbycusis is referred to as *Vaardhakyajanya Baadhira*<sup>1</sup> (senile deafness) and is classified under *Karnagata Roga* (ear diseases). The condition is primarily attributed to the vitiation of *Vata dosha*, either alone or in combination with *Kapha dosha*. An imbalance in *Vata* can lead to the degeneration of auditory nerve endings, resulting in hearing loss and tinnitus, while aggravated *Kapha* may obstruct auditory pathways, impairing sound conduction. This dual disturbance ultimately affects the *Shabdavaha Srotas* (sound pathways), contributing to progressive hearing impairment.

The primary Ayurvedic treatment for *Karnagata Roga* is *Karnapurana*, which involves the instillation of medicated oil into the external auditory canal. This therapy aims to pacify *Vata dosha* and nourish the auditory system. Classical texts, such as *Yogaratanakara*, state, “Puranam *Katutailam Hitam Vataghnameva Cha*,” indicating that oil instillation effectively alleviates *Vata* disorders. Medicated oils possess *Vatahara* (Vata-pacifying), *Snigdha* (unctuous), and *Balya* (strengthening) properties that nourish auditory structures, improve nerve conduction, and restore hearing function. Clinical studies have demonstrated

the efficacy of *Karnapurana* in reducing symptoms of presbycusis, including tinnitus and progressive hearing loss. For instance, a case report highlighted significant improvements in a 65-year-old patient following Ayurvedic management, reinforcing the role of traditional interventions in age-related hearing impairment.

In addition to *Karnapurana*<sup>2</sup> Ayurvedic management may include oral medications with anti-aging and neuroprotective properties, such as *Amalaki* (*Emblica officinalis*), *Ashwagandha* (*Withania somnifera*), and *Bala* (*Sida cordifolia*). These herbs are believed to rejuvenate the auditory system and improve hearing function. Furthermore, lifestyle modifications and dietary recommendations that balance *Vata* and *Kapha doshas* are advised to support overall auditory health.

Presbycusis is a prevalent condition with significant impacts on the quality of life of the elderly. Ayurvedic interventions, particularly *Karnapurana*, offer a promising approach to managing age-related hearing loss by addressing the underlying doshic imbalances and supporting the health of the auditory system.

#### Case report

A 56-year-old male reported experiencing reduced hearing in both ears for the past three years, occasionally accompanied by tinnitus.

#### On examination :

On local examination of the ear [Table-1], the pinna, external auditory canal, and tympanic membrane appeared normal. The tuning fork test revealed a reduction in

both air conduction and bone conduction, indicating a low positive Rinne's test. Pure tone audiometry confirmed a diagnosis of moderately severe sensorineural hearing loss. The patient could perceive sounds and comprehend speech only when spoken to in a loud voice.

Table-1. Local examination of ear

External Ear	Right Side	Left Side
Size	Normal	Normal
Shape	Normal	Normal
Preauricular Area	Normal	Normal
Postauricular Area	Normal	Normal
External Acoustic Meatus	Nad	Nad
Tympanic Membrane	Intact	Intact

#### Past History

The patient had used a hearing aid two years ago, but it proved ineffective.

#### Procedures administered to the patient :

With the patient's consent and approval, *Karnapurana* was administered once daily for seven consecutive days [Figure 1]. After a gap of seven days, the treatment was repeated. The procedural details are outlined in Table-2.



Figure 1.



Figure 2.

Table 2

<b>Poorva karma</b>	Abhyanga with <i>tila taila</i> (local massage) <i>Swedana</i> (sudation therapy)
<b>Pradhana karma</b>	Instilled 6 drops of <i>Bilwadi taila</i> in both ears for 5 min.
<b>Paschat karma</b>	Insert cotton in the ears to protect them from direct exposure to heat, cold, dust, and wind.

*Pathya (Do's)*: It is recommended to consume light (*laghu*), easily digestible (*supachya*), and warm (*ushna*) foods, along with ghee (*ghritapana*). Foods such as wheat, rice, green gram, brinjal, drumstick, and bitter gourd are beneficial. Practicing *Brahmacharya*<sup>3</sup> (celibacy), speaking little (*alpa bhashana*), and other similar practices help pacify *Vata dosha*.

*Apathya (Don'ts)*: It is advised to avoid activities like taking a head bath, drinking cold water or beverages, cleaning the ears, exposure to cold wind, intense exercise, and brushing the teeth with sticks, as these actions can aggravate *Vata dosha*<sup>4</sup>.

The patient experienced a reduction in tinnitus and reported subjective improvement in hearing within one month. The patient was able to hear sounds and comprehend loudly spoken words. It was advised to avoid exposure to loud noise. After one month of follow-up, a mild improvement in hearing was observed. During this period, the patient was prescribed *Rasayana vati* one tablet twice daily along with *Mashashwagandhadi choorna* (1 tsp BD with milk) and *Karnapurana* with *Bilwadi taila*.

This study indicates a notable reduction in tinnitus and a subjective improvement in hearing within one month of treatment. The patient, who had difficulty hearing, was able to perceive sounds and understand words spoken loudly, demonstrating the effectiveness of the prescribed therapy. Despite the gradual nature of hearing loss, the patient showed mild improvement over the one-month follow-up period, highlighting the potential for progress with appropriate intervention. The prescribed treatments, including oral medication and local therapy like *Karnapurana*<sup>5</sup> with *Bilwadi taila*, appear to have contributed to this improvement. However, the recommendation to avoid exposure to loud noises emphasizes the importance of managing environmental factors in preserving hearing function. These results suggest that while the treatment has shown positive effects, further monitoring and long-term management are essential for continued improvement in hearing and quality of life.

**Mode of action:**

*Karnaabhyanga* (Ear Massage) :

For *Karnaabhyanga*, *murchita tilataila*

(processed sesame oil) was utilized. This oil possesses qualities such as *vyavayi* (penetrating), *vikaasi* (expansive), *sukshma* (subtle), *vishada* (clear), *guru* (heavy), and *sara* (essence), along with an *ushna* (hot) potency and *madhura* (sweet) *vipaka* (post-digestive effect). These characteristics allow it to primarily act on vitiated *vata* dosha, helping to pacify and normalize its function, thus supporting the auditory system.

As *tilataila* is considered *brimhana* (nourishing), it aids in the nourishment of the ear (*shravanendriya*) and enhances the hearing mechanism<sup>6</sup>.

*Bhashpa Swedana* (Sudation Therapy):

*Swedana*, due to its properties such as *ushna*, *sara*, *snigdha*, *sukshma*, and *sthira*, facilitates the faster absorption of oil into the ear. It helps in *vata-shamana* (pacification of *vata dosha*), improves blood circulation<sup>7</sup>, and strengthens the ear. These effects contribute to the improvement of auditory function by addressing both the physiological and functional aspects of hearing<sup>8</sup>.

*Karnapurana* (Instillation of Medicated Oil into the External Auditory Canal):

The ear is considered the seat of *vata dosha* and plays a key role in the hearing mechanism, as described in *Ashtanga Hridaya* (*Pakwashaya katisakthi shrotasthi...Buddhi hridayendriya chitta drik*). The condition of *baadhira* (deafness) often arises due to the vitiation of *vata dosha*. *Karnapurana* helps in *vata-shamana*, restoring normal hearing

capacity<sup>9</sup>. As Acharya Charaka states, “*na karnarogaa vatottaha...nochchai shrutihi na badiryam syannityam karma tarpanaat.*” The use of *Bilwataila* for *Karnapurana* is especially effective due to its *ushna veerya* and *vatahara* properties, helping normalize *vata* dosha and maintain ear health. Research on Bilwa leaf<sup>10</sup> extract has shown potential regeneration of damaged cells in the pancreas, suggesting that Bilwa may help nourish and regenerate damaged ear cells as well<sup>(11)</sup>. Additionally, *Bhavaprakash Nighantu* describes *Bilwa* as a *nadi balya* (nerve-strengthening) herb, further supporting its beneficial effects on ear tissue and the hearing process.

#### Oral Medication :

*Mashashwagandhadi churna*, which contains *Ashwagandha*, *yashtyahwa*, *swadamshtra*, *Mudga bija*, and *Pakwa Rambha phala*, is known for its regenerative properties in nerve cells, improving their function and promoting healing<sup>12</sup>. *Rasayana Vati*, containing Suvarna Bhasma and Abhraka Bhasma, Triphala, Ashwagandha, shatavari, pippali, guduchi, brahmi is a renowned immunomodulatory combination that counters the harmful effects of stress and enhances the body's immune system. These compounds exert a *rasayana* effect, especially beneficial for elderly patients. In this case, the *rasayana* drugs likely played a key role in improving the *rasa* and *rakta* dhatus, contributing to the early improvement in sensorineural hearing loss<sup>13</sup> and preventing further deterioration of the condition. Correcting abnormalities in the body's tissues indirectly aids hearing by restoring the functionality of the inner ear.

The report presents a case of tinnitus

and hearing loss<sup>14</sup>, showing significant improvement over a one-month treatment period. The patient exhibited better sound perception and comprehension of louder speech while being advised to avoid exposure to loud noise. Treatment involved oral medications such as *Rasayana Vati*, *Mashashwagandhadi Churna*, and *Karnapurana* with *Bilwadi Taila*, which contributed to the observed progress. Beyond the physical symptoms, the report highlights the psychological distress associated with hearing loss, emphasizing its impact on the patient's quality of life. The gradual degeneration of the organ of Corti and nerve fibres is identified as a major factor in progressive deafness, often accompanied by tinnitus. However, the study lacks detailed insights into the exact aetiology of the hearing loss and the pharmacological basis of the prescribed medications. Incorporating objective diagnostic tests like Pure Tone Audiometry<sup>15</sup> and a more comprehensive discussion of the underlying pathology would strengthen the findings. Additionally, long-term follow-up is essential to evaluate the durability of the improvement and the sustained efficacy of the treatment in managing sensorineural hearing loss.

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