



Case Study

HEARING LOSS (BADHRIYA) AND ITS AYURVEDIC MANAGEMENT

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Article info

Article History:

Received: 28-04-2024

Accepted: 21-05-2024

Published: 10-06-2024

KEYWORDS:

Badhriya, Hearing loss, Karan pooran, Marsha Nasyam.

ABSTRACT

Hearing is an important medium, which keeps one connected to other and with the surroundings. Impairment of hearing and its severity may vary from mild to moderate or profound. It can be unilateral or bilateral and conductive or sensorineural or mixed type. *Acharya Sushruta* has explained 28 types of *Karna-roga* in *Uttar Tantra* an *Badhriya* is one of them. It is caused by *Vata dosha* or *Kaphaavritta vata dosha* by *Srotorodha* (obstructing of channels) of *Shabdavaha srotas* (pathway of hearing) and *Shabdavaha sira* (auditory nerve) and further ignorance of this condition leads to *Badhriya*. This case report presents 18 years old girl with hearing impairment in the right ear from 3 years. Audiometry reports shows moderate to severe mixed HL in right ear and left ear is normal. Treatment was done with *Marsha nasyam* with *Shadbindu* oil and *Karanpooran* with *Bilwadi* oil (right ear) for 7 days. Along with *Sarivadi vati*, *Chandraprabha vati* as internal medicine for 1 month.

INTRODUCTION

Hearing-it is transduction of sound to neural impulses and its interpretation by the CNS.

Hearing loss- It is defect at any level from sound transduction to interpretation or A person is said to have hearing loss when his hearing is elevated to 20 decibal or above.

Causes of Hearing Loss

1. Causes of conductive hearing loss- Rupture of tympanic membrane, fractured base of skull, foreign body, ossicular disruption. ASOM and CSOM, furunculosis of ear canal, neoplasm, wax in ear, otosclerosis, eustachian catarrh, eustachian tube dysfunction due to diseases of nose, paranasal sinuses and pharynx.
2. Causes of the senso-neural hearing loss- Explosive blast and noise induced hearing loss, labyrinthitis, drug toxicity like neomycin, kanamycin, diuretics etc, tobacco, alcohol, aniline dyes, 8th nerve tumour, meniere's diseases.
3. Causes of mixed hearing loss- Trauma: Blast injury, acoustic trauma, head injury. CSOM with

labyrinthitis, otosclerosis.

Conductive hearing loss- Sound is not conducted efficiently through the outer ear canal to ear drum and through the bony ossicles in middle ear.

Sensorineural (SNHL)- Damage to the inner ear (cochlea) or to the auditory nerve pathway from the inner ear to the brain.

Mixed- Both conductive and sensorineural hearing loss. Over 5% of the world's population or 430 million people require rehabilitation to address their disabling hearing loss. It is estimated that by 2050 over 700 million people or 1 in every 10 people will have disabling hearing loss. The prevalence of hearing loss increases with age, among those older than 60 years, over 25% are affected by disabling hearing loss. Examination to diagnose hearing loss are-

Diagnosis: While taking history it is important to know that whether the diseases are congenital or acquired or related to other diseases. Various hearing assessment test like tuning fork test includes- rinne test, weber test, Absolute bone conduction test reveal the kind of hearing loss. Pure tone audiometry is the main test to assess the type of hearing loss. Other audiometric test like tympanogram, BERA test also help to assess.

Apart from these test depending upon aetiology suspected e.g. X-ray or CT scan for sinusitis

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Treatment: Treatment of underlying diseases like CSOM, perforation of TM, obstruction of eustachian tube.

Treat the underlying cause like sinusitis, meniere's diseases.

Ototoxic drugs should be used with care if causing hearing loss.

Rehabilitation of hearing impaired- instrumental devices includes Hearing aids, Implants, assistive devices for the deaf. Training like speech training, Audiometry training, speech conservation.

Ayurvedic View

Shalaky is important branch of Ayurveda which deals with the diseases above clavicular region. *Acharya Sushruta* has explained 28 *Karna-rogas* *Badhriya* is one of them and 25 *Karna rogas* mentioned by *Acharya Vagbhat*. *Acharya Charak* hasn't mentioned *Badhriya* among 4 types of *Karna roga* he has explained. He has mentioned *Badhriya* in *Nanatmaj vataj vyadhi*.

According to *Acharya Sushruta*, vitiated *Vata Dosha* along with *Kapha dosha* resides in *Shabdanuvaha Sira* and in the absence of proper treatment the person will suffer from *Badhriya* without any doubts. According to *Acharya Vagbhatta*, *Kaphanugata vata* (*Vata* associated with *Kapha*) or by neglect of *Karnanada*, gives rise to hearing of loud sounds only, hearing with difficulty and gradually leads to deafness. Common etiological factors of *Karnaroga* are described such as- exposure to dew, playing in (unhygienic) water, to scratch in the ear canal, other *Vata* vitiating factors. *Acharya Sushruta* has mentioned general line of treatment for *Karnaroga* like *Snehan*, *Sweden*, *Rasayana*, *Ghrith pana*. Treatment modalities mentioned for *Badhriya* are *Vatavyadhi's* treatment, *Pratishaya's* treatment. According to *Yogratanakar* mentioned *Karanpooran* with *Apamarga kshara tail*. *Acharya Sharangdhar* mentioned *karanpooran* with *Bilwadi tail* in treatment of *Badhriya*.

Case Description

Date: 13/03/2023

Age: 18years

Sex: Female

Occupation: Student

Place: Azamgarh, Uttar Pradesh

Chief complaints

Decreased hearing in right ear from 3 years.

Pain in same ear

Ringing sound in right ear

Headache

History of present illness

A 18 years old girl visited OPD of *Shalaky tantra* department, in our hospital with complaint of hearing loss in right ear from 3years which is progressive in nature. She also complains of headache, frequent cold and tinnitus (ringing sound) in same ear. On investigation MRI impressions was B/L maxillary and anterior ethamoidal sinusitis and PTA impression was moderately severe mixed hearing loss in right ear. She already taken consultation from allopathic doctor and were advised for hearing aid in right ear. She was taking medicine for sinusitis but got no relief. So she came to our OPD for Ayurvedic treatment.

History of past illness

No past history found

Family history

No any family history found.

Ear examination

On local examination

Nose- RT. Side DNS, nasal mocosa congested

Throat- congested

Otoscope

1) EAC: B/L clear

2) TM: B/L intact

Audiometry (13/03/2023)

RT. Ear- Moderately severe mixed hearing loss.

LT. Ear- Hearing sensitivity within normal limits.

Impedance - RT. Ear - A, present reflex

Lt. Ear - A, present reflex.

General examination- She was moderately built with height and 47kg weight.

Pulse rate was 75/min, blood pressure 110/84 mm of Hg and respiratory rate was 24/min.

Treatment: Various Ayurvedic interventions were adapted to treat this patient. On the first visit *Sarivadi vati*, *Chandraprabha vati*, and combination of *Taleesadi churna*, *Abrak Bhasma*, *Prvaal pishti*, *Trikatu churna*.

Treatment	Medicine	MOA
<i>Marsha Nasyam</i>	<i>Shadbindu oil</i>	6-6 drops in each nostril for 7days.
<i>Karanpooran</i>	<i>Bilwadi oil</i>	Gentle massage was done with lukewarm oil around the ear and pinna for 15min then Lukewarm <i>Bilwadi oil</i> drops were poured till the right ear canal was filled up and gently massage the root of ear. The medicated oil was retained in same position for 10 min.

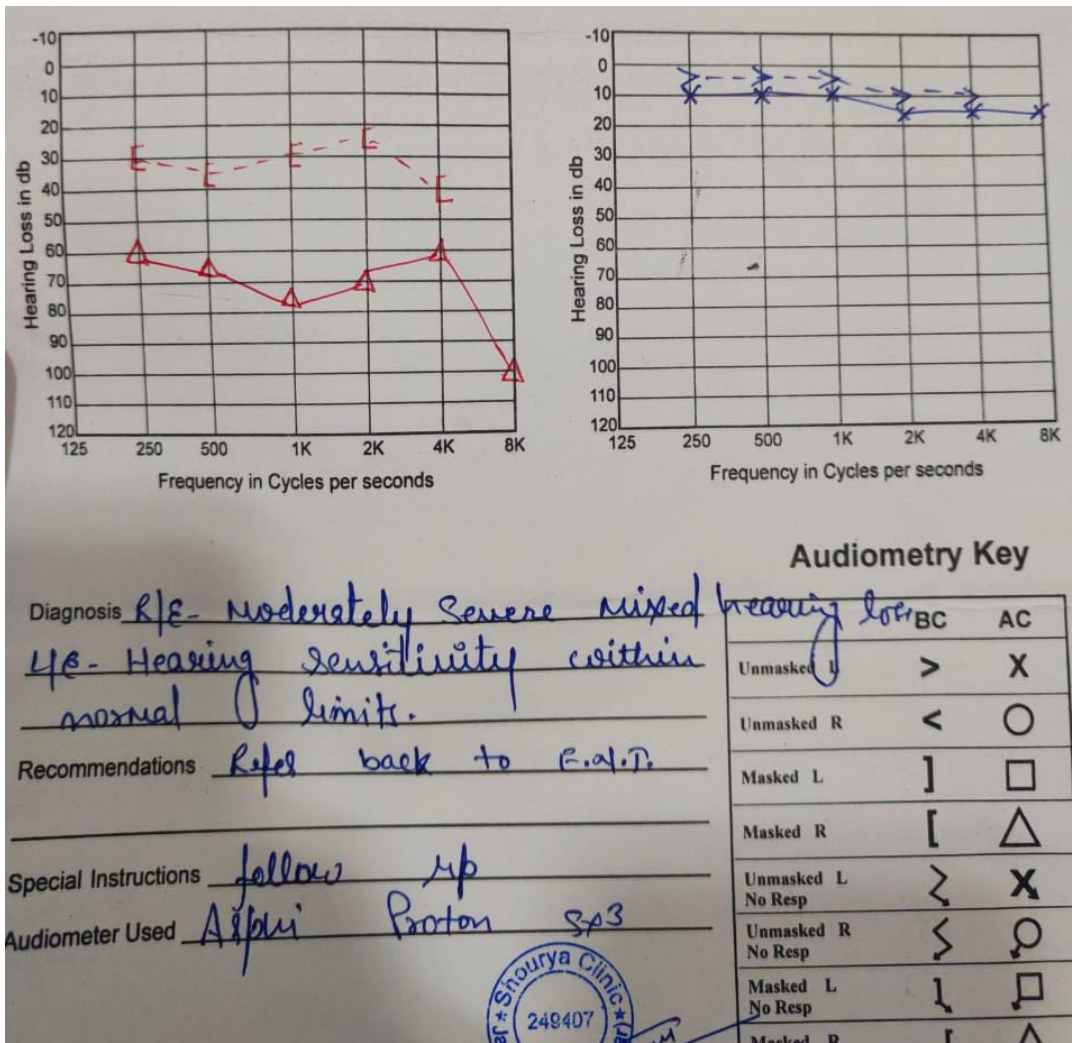
Medicine	MOA
Sarivadi vati	2-2 tablet twice a day before meal.
Chandraprabha vati	2-2 tablet twice a day before meal.
a) Taleesadi churn	100gm
b) Trikatu churn	Mix all medicine and take 1tsp with lukewarm water
c) Abrak bhasm	50gm before meal twice a day.
d) Pravaal pisthi	10gm 10gm

After the completion of procedures for a week, she was again instructed to continue the Ayurvedic medicines prescribed in first visit for 1 month.

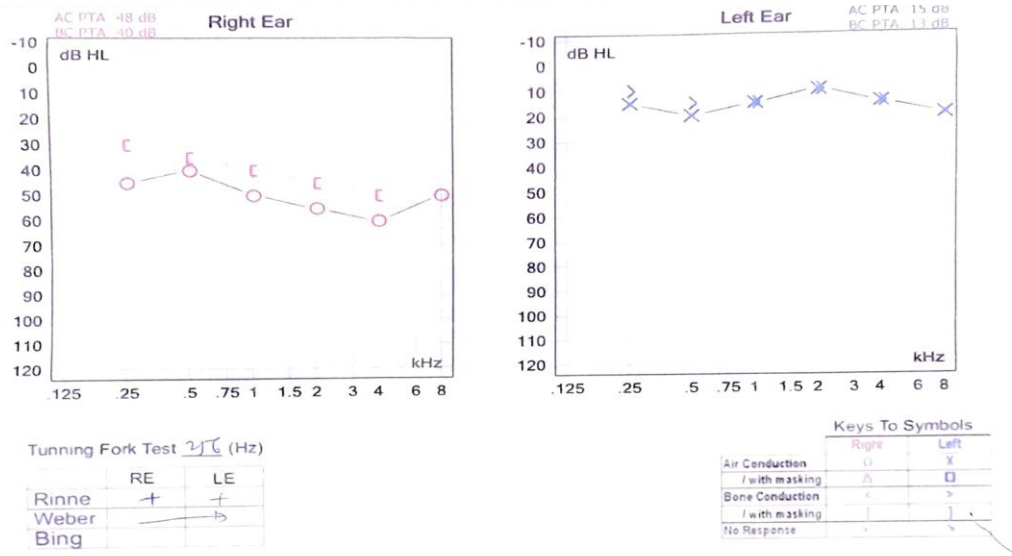
RESULTS

After 5 sitting of treatment at a gap of 30 days patient got excellent result in hearing loss. Other associated symptoms of chronic cold have also been managed. Audiometric test before and after therapy are depicted in figure A and Figure B respectively.

Before Treatment



After treatment



DISCUSSION

Ears are said to be the seat of *Vata dosha* and are responsible for hearing mechanism as quoted in *Ashtanga Hridayam* “*Pakwashaya katisakthi shrotra asthi sparshanindriyam (A/H)*”. *Badhriya* mainly occurs due to vitiation of *Vata* along with *Kapha dosha* that occupies *Shabdavaha sira* in *Shrotrendriya* leading to *Shrotorodha*. With lack of proper treatment, this condition ultimately leads to *Badhriya*.

Mixed hearing loss is trouble hearing in both the middle or outer ear – known as conductive hearing loss and the inner ear known as sensorineural hearing loss. The primary symptoms of mixed hearing loss include difficulty hearing soft sounds and trouble understanding speech, particularly in noisy environments. Eustachian tube dysfunction has a range of potential causes. Some allergies and infection like common cold, throat infections can trigger Eustachian tube dysfunction, and it causes the ET to become inflamed and filled with mucous. Common symptoms of ET dysfunction include earache, fullness of ears, heaviness of ears, hearing loss etc. We treated the patient depend on the cause of the condition.

Ayurvedic management of *Badhriya* is based on *Pratishaya chikitsa vidhi* and *Rasayana chikitsa*. *Rasayana chikitsa* probably help in regeneration and repair of damaged hair cells which have improved hearing. The “*Pratishaya Vyadhi Chikitsa*” *Siddhant* can be implemented as a management of *Badhriya*.

Sarivadi vati is primarily used for the treatment of ear diseases. It removes the *Avarodha* of *Srotasa* and do *Vatanulomana* with *Kapha Shamana*. It has also property of *Rasayana*.

Chanderprabha vati pacifies the aggregated *Doshas* and it has many properties like *Vrishya*, *Balya*, *Rasayana*.

Combination of *Taleesadi churn*, *Trikatu churn*, *Abhrak bhasm*, *Prvaal pishti* is used for the treatment of *Pratishaya*.

Effect of Therapy

According to various *Acharyas* it is explained that drug administrated through the nose travel through the *Nasa srotas* (channels) and reach *Shringataka*, from where it spread to various parts including the *Murdha* (brain), *Netra* (eye), *Shrotra* (ear), *Kantha* and effectively removes the accumulated *Doshas* in the *Urdwajatru*. In this study, *Shadbindu* oil was chosen as the *Nasya* medicine.

According to Ayurveda, the ear is the seat for *Vata dosha* resides. *Karanpooran* calms the *Vata dosha* as *Bilwadi Tail* has the *Vatashamaka* property.

Patient was prescribed routine and classical Ayurveda medicine and was not treated with any intentions of future publication we have not taken any accent of patient or prior

CONCLUSION

Hearing loss is a complex disability. Hearing loss can significantly impact children’s participation in social activities and cause financial burdens on their parents. As mentioned earlier hearing loss can be correlated with *Badhriya* in Ayurveda. *Shadbindu* oil *nasyam*, *Bilwadi tail karanpooran* with internal medicine have provided significant improvement in the present case. The patient is still continuing the treatment and in longer duration. This case showed encouraging results with the given treatment without any side effects.

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Cite this article as:

Sarita Sandhu, Jyoti Gupta. Hearing Loss (Badhriya) and its Ayurvedic Management. International Journal of Ayurveda and Pharma Research. 2024;12(5):126-130.

<https://doi.org/10.47070/ijapr.v12i5.3252>

Source of support: Nil, Conflict of interest: None Declared

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