

HEARING LOSS (BADHIRYA) AND ITS AYURVEDIC MANAGEMENT: A CASE STUDY

Dr. Sheweta Kotwal*¹, Dr. Komal Bisht² and Dr. Daya Shankar Singh³

^{1,2}MS Scholar, 3rd Year PG Department of Shalaky Tantra,

³Associate Professor, PG Department of Shalaky Tantra,

Patanjali Bhartiya Ayurvigyan Evam Anusandhan Sansthan, Haridwar, Uttrakhand-249405.

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*Corresponding Author

Dr. Sheweta Kotwal

MS Scholar, 3rd Year PG

Department of Shalaky

Tantra, Patanjali Bhartiya

Ayurvigyan Evam

Anusandhan Sansthan,

Haridwar, Uttrakhand-

249405.

ABSTRACT

Badhrya- as word 'Badha' means obstruction. Acharya Sushrut has mentioned 28 Karna rogas and Badhrya is one among them. This condition is mainly characterized by srotorodha due to predominance of vata or vata kapha dosha. Parallel to this Badhrya, is condition which has presentation of hearing loss. Hearing impairment is the most frequent sensory deficit in human populations, over 5% of the world's population – 360 million people has disabling hearing loss (328 million adults and 32 million children). Hearing impairment is one such condition that has not much treatment modality. In India itself, 63 million people (6.3%) suffer from significant hearing loss. A diagnosed case of Hearing loss with moderate SNHL (sensori-neural hearing loss) in Right ear and Moderately severe mixed hearing loss in Left ear attended the Shalaky OPD of Patanjali Ayurvedic College,

Haridwar and the condition was successfully managed by adopting Ayurvedic treatment like nasya, karnpooran, matra vasti and shiropichu along with oral medicines. After 1 year of treatment, tremendous results are obtained.

KEYWORDS: *Badhrya*, Hearing impairment, SNHL, *Karnpooran*, *nasya* etc.

INTRODUCTION

Hearing impairment is most commonly seen in almost all the age groups because of the noise pollution, drug abuses, congenital, bad dietary habits, stressful life and many other idiopathic causes. Hearing loss may be mild, moderate, severe, or profound. It can affect one ear or both ears, and leads to difficulty in hearing conversational speech or loud sounds. According to

WHO definition, “A person who is not able to hear as well as someone with normal hearing – hearing thresholds of 25 dB or better in both ears – is said to have hearing loss”. Hearing impairment is the most frequent sensory deficit in human populations, over 5% of the world’s population – 360 million people has disabling hearing loss (328 million adults and 32 million children).^[1] Hearing impairment is one such condition that has not much treatment modality. In India itself, 63 million people (6.3%) suffer from significant hearing loss.^[2]

Prevalance Rate^[3]

- According to WHO, Over 5% of the world’s population, or 466 million people – has disabling hearing loss (432 million adults and 34 million children).
- It is estimated that by 2050 over 900 million people – or one in every ten people – will have disabling hearing loss.
- 1.1 billion young people (aged between 12–35 years) are at risk of hearing loss due to exposure to noise in recreational settings.
- Unaddressed hearing loss poses an annual global cost of 750 billion international dollars.

Classification of Hearing loss

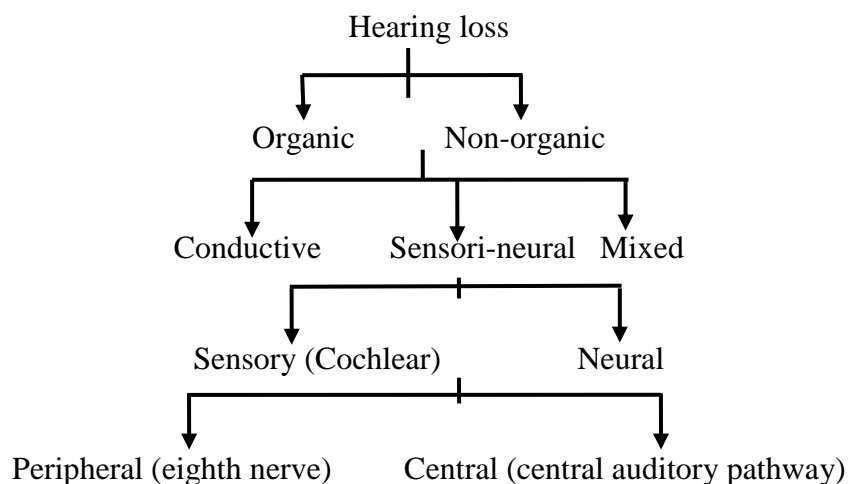


Fig. 1 – Classification of Hearing loss.

Aetiology^[4]

Sensorineural Hearing Loss (SNHL)		Conductive Hearing Loss	
Congenital	Acquired	Congenital	Acquired
It is present at birth and is the result of anomalies of the inner ear or damage to the	Common causes of SNHL include: <ul style="list-style-type: none"> • Infections of labyrinth-viral, bacterial or spirochaetal • Trauma to labyrinth or 8th 	<ul style="list-style-type: none"> • Microtia/atresia • Tympanic membrane abnormalities 	<ul style="list-style-type: none"> • Infection (acute otitis media, otitis externa, ossicular erosion) • Otitis media with effusion

hearing apparatus by prenatal or perinatal factors.	nerve, e.g. fractures of temporal bone or concussion of the labyrinth or the ear surgery <ul style="list-style-type: none"> • Noise-induced hearing loss • Ototoxic drugs • Presbycusis • Meniere's disease • Acoustic neuroma • Sudden hearing loss • Familial progressive SNHL • Systemic disorders e.g. diabetes, hypothyroidism, kidney disease, autoimmune disorders, multiple sclerosis, blood dyscrasias. 	<ul style="list-style-type: none"> • Ossicular malformations fixation etc. 	<ul style="list-style-type: none"> • Foreignbody (including cerumen) • Cholesteatoma • Trauma (Ossicular disruption, tympanic membrane perforation)
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Diagnosis

While taking history it is important to know whether disease is congenital or acquired, stationary or progressive, associated with other syndromes or not. Various hearing assessment tests like Rinne's Test, Weber's Test, Air Bone Conduction Test etc reveals the type of hearing loss. Pure Tone Audiometry is the main test assessing the type of Hearing loss with degree (mild, moderate, severe, profound or total loss). Tympanogram, BERA test are other audiometric tests also.

Beside this, various laboratory tests depending upon on the aetiology suspected, e.g. X-rays or CT scan of temporal bone for evidence of bone destruction (congenital cholesteatoma, middle ear malignancy etc.), blood counts (leukemia), blood sugar (diabetes), thyroid functions (hypothyroidism), kidney function tests, etc.

Treatment

- Removal of canal obstruction, any fluid (myringotomy), mass like tumours or cholesteatoma, in case of conductive deafness.
- Treat the aetiology causing the disease, like Syphilis of the inner ear is treatable with high doses of penicillin and steroids with improvement in hearing. Hearing loss of hypothyroidism can be reversed with replacement therapy. Serous labyrinthitis can be

reversed by attention to middle ear infection. Early management of Menier's disease can prevent further episodes of vertigo and hearing loss.

- Surgeries like stapedectomy (in otosclerotic fixation of stapes footplate), Tympanoplasty, cochlear implants etc.
- Ototoxic drugs should be used with care and discontinued if causing hearing loss. In many such cases, it may be possible to regain hearing, total or partial, if the drug is stopped.
- Rehabilitation of hearing impaired with hearing aids and other devices.

Ayurvedic View

Parallel to this Hearing loss, Badhirya is similar to this in Ayurveda. Badhirya- as word 'Badha' means obstruction. Acharya Sushrut has mentioned 28 Karna rogas^[5] and Badhirya is one of them. This condition is mainly characterized by srotorodha due to predominance of vata or vata kapha dosha.^[6] For treatment of Badhirya, vataghna or vata-kaphaghna is the treatment modality mentioned in context to Badhirya which includes vatshamak snehana, swedan, karnpooran with vata-kaph shamak tail, nasya for kaphaghna property and vatashamak rasayana drugs.

CASE REPORT

A male of 40 yrs. old, resident of Uttar Pradesh visited OPD of Shalaky Tantra department, Patanjali Ayurvedic Hospital in Haridwar, October 2016 with complaints of diminished hearing in both ears since 2 years He also complained of frequent cold allergy since 1 year. He already had taken consultation from allopathic doctor and was diagnosed with moderately SNHL in Right ear and moderately severe mixed hearing loss in Left ear. He was taking only anti allergic medicines and nasal decongestants whenever he was having Cold but his problem hasn't solved.

So, he came to OPD of Shalaky Tantra department, Patanjali Ayurvedic Hospital in Haridwar, for the treatment of hearing problem.

General examination

- Pallor- Nil Pulse- 78 bpm
- Icterus- Nil Respiratory rate- 18 episodes/ min
- Cyanosis- Nil B.P. – 126/88 mm/Hg
- Oedema- Nil Temperature – 98.6°F

- Weight- 75 kg

Systemic Examination: No Abnormality detected in any system.

On local examination

- Bilateral pinna, external auditory canal are normal.
- Otoscopy revealed the bilateral tympanic membrane normal. No discharge, growth and perforation.

Tuning fork test

1. Rinne's test positive in bilateral ear.
2. Webber test lateralized to left ear.

Treatment & methodology schedule: Treatment was planned in two sittings with a gap period of 6 months.

Duration

1. 1st Treatment from 10-10-16 to 22-10-16.
2. 2nd Treatment from 23-4-17 to 4-5-17.

1 st Treatment	Date	Medicine
Ksheerdhoom nasya	From 10-10-16 to 15-10-16	Ksheerbala 101 (A).
Karnpooran	From 16-10-16 to 22-10-16	Bilwa oil + Dhanwantari oil
Shiropichu	From 16-10-16 to 20-10-16	Ksheerbala oil
Matravasti	From 16-10-16 to 20-10-16	Ksheerbala oil

Patient discharged with the following medication and Was advised to come for check up after 6 months:

Sr.	Medicine	Qty.	Anupana	Schedule
1.	<ul style="list-style-type: none"> • Vatari churna • Pravaal pishti • Swarnmakshik bhasm • Ekangveer ras • Vrihat vatchintamani ras 	100 gm 10 gm 5 gm 10 gm 2 gm	With lukewarm water/honey	Mix all the contents and make 60 doses out of it. Take 1 dose B.D. ½ an hour before food
2.	<ul style="list-style-type: none"> • Vishtinduk vati • Aamvatari ras • Sarivadi vati 	20 gm 20 gm 20 gm 20 gm	With lukewarm water	Take 2 tab. Each after food
3.	Brahmi ghrita	200 ml	With lukewarm water/ milk	1-1 tsp before food

2 nd Treatment	Date	Medicine
Ksheerdhoom nasya	From 23-04-17 to 27-04-17	Ksheerbala 101 (A).
Karnpooran	From 28-04-17 to 04-05-17	Bilwa oil + Dhanwantari oil
Shiropichu	From 28-04-17 to 02-05-17	Ksheerbala oil
Matravasti	From 28-04-17 to 02-05-17	Ksheerbala oil

Patient was discharged with the previous medicines as such for 1 month more.

RESULTS

After 6 months, Results obtained were tremendous, with his symptoms of hearing loss has been very much minimized. Other associated complain of cold allergy has also been managed to some extent. Audiometric tests before and after therapy are depicted in figure A and figure B respectively.

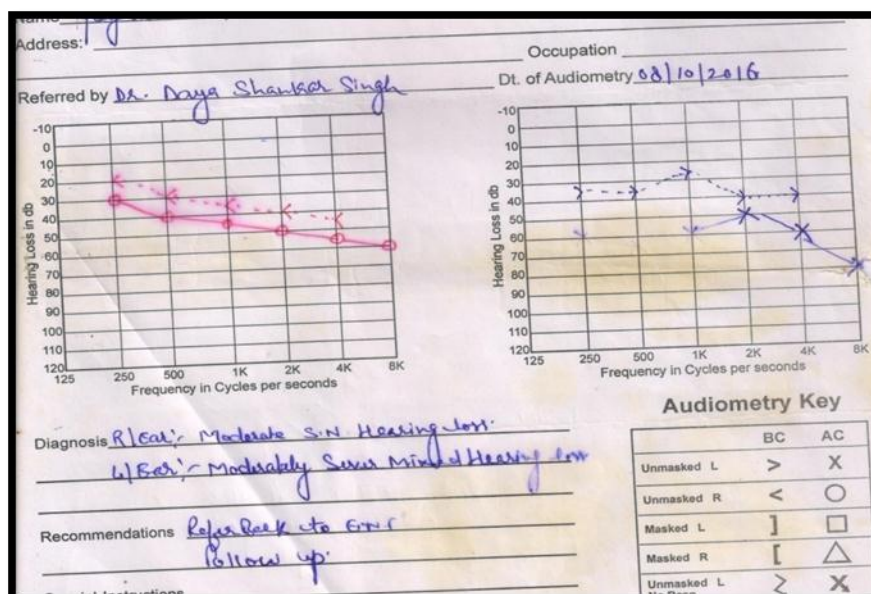


Fig. A Before Treatment.

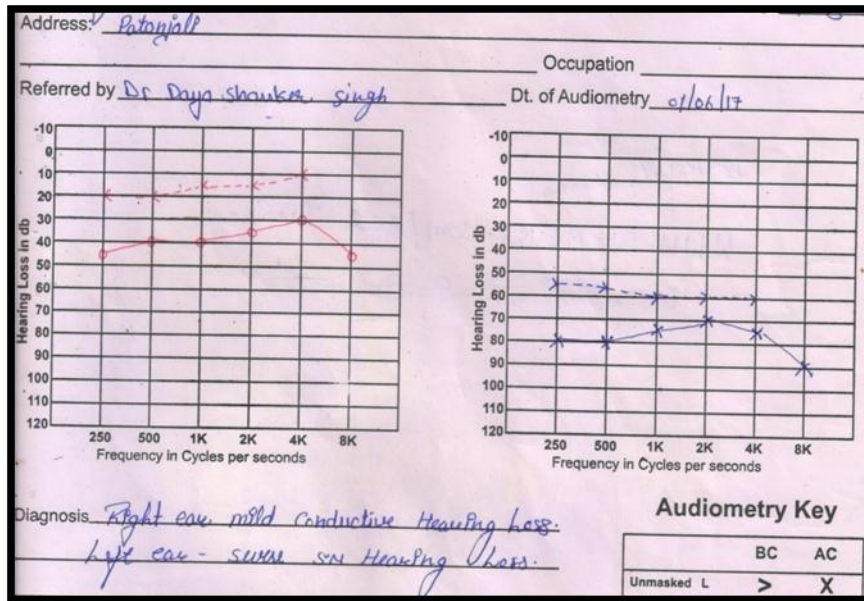


Fig. B(1) After Treatment.

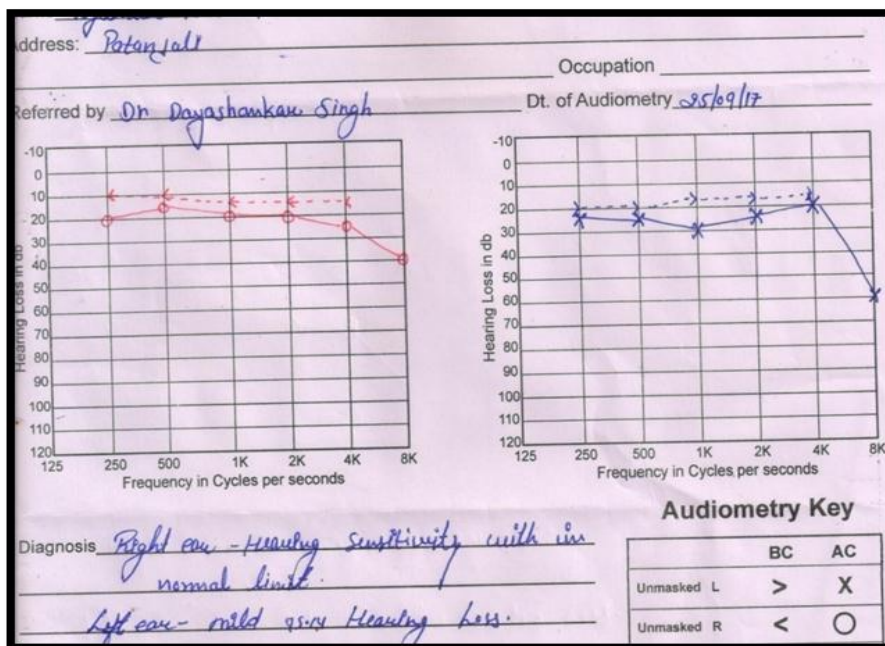


Fig. B(2) After Treatment.

DISCUSSION

As mentioned earlier that the signs and symptoms of Hearing loss can be correlated with Badhriya in Ayurveda. Badhriya is due to vitiation of vata and kapha dosha. Ksheer dhoom Nasya with ksheerbala oil scratches out the kapha dosha from shira and improves the function of indriyas (karnaindriya) thereby clearing the srotorodha. Karnpooran is one of the basic treatment mentioned in ayurvedic literature for all karna rogas. Karnpooran with Bilwa tail

and dhanwantari tail has the vatashamak property. Meanwhile matravasti with ksheerbala tail targets the whole vitiated vata in the body thereby alleviating it. As Shringataka marma⁷ in shira is the junction of all sense organs like eye, ear, nose and any medicine applied over this area targets the vitiated doshas related to all sense organs and helps in nourishment of nerves connecting to these areas. So Shiropichu (placing of oil on the anterior fontanelle) with Ksheerbala tail was planned which pacifies the aggravated vata dosha in head and helps to normalize the function of central nervous system by nourishing the nervous system and balancing the circulation of blood in the sense organs including ear also. The follow up medicines further disintegrated the vata dosha by taking mixture of Vatari churna, Pravaal pishti, Swarnmakshik bhasm, Ekangveer ras and Vrihat vatchintamani ras. Rest of the morbid dosha was expelled by combination of medicines like Sarivaadi vati, vishtinduk vati and Aamvatari ras. Brahmi ghrita provided nourishment to the debilitated nerves of auditory system.

CONCLUSION

Exclusion from communication can have a significant impact on person's life, they may suffer from social stigmatization, feeling of loneliness, frustration and isolation as a result of hearing impairment. Patient is bound to take the shelter of hearing aids, which is not a complete solution for the condition. The cost of the equipment is unaffordable by the middle and lower class population. This creates a necessity to evolve an alternative management for hearing impairment. Here in the present case, various ayurvedic kriyakalp and multiple oral medicines were administered in Badhirya. This case showed encouraging results with the given treatment in low caste and without any side effects.

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