

Critical Analysis of *Badhirya* with special reference to Hearing Loss

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Abstract : *Maharshi Sushruta* has mentioned 28 types of *Karna-Roga* in *Uttar Tantra* and *Badhirya* is one among them. *Badhirya* is caused due to the vitiated *Vata Dosha* or *Vatakapha Doshas* by deranging or obstructing the *Shabdavaha Srotas* (pathway of hearing) or *Shabdavaha Sira* (auditory nerve) or due to negligence of *Karnanada* etc and gives rise to diminished hearing or incapability of hearing. Deafness is defined as a partial or complete inability to hear. Defect at any level from sound transduction to interpretation can cause hearing loss. Therefore, deafness (hearing loss) can be considered under the caption of *Badhirya*. In the present study, a review is presented on *Badhirya* and hearing loss to enlighten the correlation and thus providing an alternative treatment option for hearing loss.

KEYWORDS *Vata, Kapha, Badhirya, Hearing Loss.*

INTRODUCTION

Shalakya is an important branch of *Ayurveda* which deals with the diseases manifesting above clavicular region. *Aacharya Susrutha* is the only person who explained Ophthalmology and ENT in a systematic manner in *Uttara tantra* portion of his treatise *Sushruta Samhita*.

Aacharya Sushruta has mentioned 28 types of *Karna-Roga* in *Uttar Tantra* and *Badhirya* is one of them¹. According to *Ayurveda*, *Shrotrendriya* originates from *Akasha Mahabhoota*. *Shabda* (sound) travelling through *Vata* in the presence of *Aakasha* (space) comes in contact with *Shrottendriya Adhishthana* (*Karna*) and transmitted through *Shrottendriya* to the *Shravana Buddhi* which is responsible for perception of sound. So, *Vata* plays important role in normal hearing procedure. According to *Aacharya Sushruta*, vitiated *Vata Dosha* along with *Kapha* resides in *Shabdanuvaha Sira* and in the absence of appropriate treatment the person will suffer from *Badhirya* without any doubts². *Acharya Dalhana* comment on this *Samprapti* that not only *Vata Dosha* but also *Rakta*, *Pitta* and *Kapha Doshas* also reside in *Shabdanuvaha Sira* causing *Badhirya*³. According to *Aacharya Vagbhatta*, *Vata* associated with *Kapha* and getting increased or by neglect of *Karnanada*, gives rise to hearing of loud sounds only, hearing with difficulty and gradually leads to deafness⁴.

Hearing loss or hearing impairment is a partial or entire inability to hear. It can result in hearing conversational speech or loud sounds with difficulty. It can be unilateral or bilateral. Disabling hearing loss refers to hearing loss more than 40 decibels (dB) in the better hearing ear in adults and a hearing loss more than 30 dB in the better hearing ear in children. 'Deaf' people have profound hearing loss mostly which indicates very little or no hearing. They generally use sign language for communications⁵.

Deafness can be divided basically into three types- sensorineural, conductive and mixed. A sensorineural hearing loss results from lesions of the cochlea, VIIIth nerve or central auditory pathways. Conductive hearing loss occurs

when there is problem in external or middle ear which interferes with conduction of sound to the inner ear. Mixed hearing loss occurs when both conductive and sensorineural hearing loss are present.

Low and middle-income countries have great number of people with disabling hearing loss. Over 5% of the world’s population or 466 million people have disabling hearing loss (432 million adults and 34 million children). It is estimated that by 2050, over 900 million people or one in every 10 people will have disabling hearing loss. Approximately one third of people over 65 years of age are affected by disabling hearing loss⁶.

Nidana

The specific etiology of each *Karnaroga* is not mentioned in any *Ayurvedic* classics, certain common etiological factors of *Karnaroga* are described which are – *Avasyaya*, *Jalakrida*, *Karnakandu*, *Mithya yogensastrasya*, and *Pratisyaya*⁷. While going through *Sushruta Samhita* the following *Nidana* were described to cause the disease *Badhira* which were described in different chapter in the contexts of some special disease or references in different *Sthana* of *Sushruta Samhita*.

- By trauma on *Vidhura Marmas*
- By installing *Vishana* tail in ear⁹
- By *Dosha* of *Shukra* and *Shonita* in *Janambala Pravrita Rogas*¹⁰
- Due to *Karnarsha*¹¹
- Due to hearing of profound sound in *Ritu Kala*¹²
- Because of *Ardita*¹³

Causes of hearing loss in modern science are as mentioned in table 1 ¹⁴–

Table 1 Causes of Hearing loss	
Conductive Hearing Loss	Sensorineural Hearing Loss
Congenital causes-	Congenital causes-
• Meatal atresia	present since birth due to anomalies of the inner ear
• Fixation of stapes footplate	or damage to the hearing apparatus by prenatal or
• Fixation of malleus head	perinatal factors
• Ossicular discontinuity	
• Congenital cholesteatoma	
Acquired causes-	Acquired causes-
External ear	• Infections of labyrinth
Any obstruction in the ear canal, e.g. wax, foreign	• Labyrinth or VIII th nerve trauma
body, furuncle, acute inflammatory swelling, benign	• Noise-induced hearing loss
or malignant tumour or atresia of canal.	• Ototoxic drugs
Middle ear	• Presbycusis
• Perforation of tympanic membrane	• Ménière’s disease
• Fluid in the middle ear	• Acoustic neuroma
• Mass in middle ear	• Sudden hearing loss
• Disruption of ossicles,	• Familial progressive SNHL
• Chronic suppurative otitis media	• Systemic disorders, e.g. diabetes, hypothyroidism,
• Cholesteatoma	kidney disease, autoimmune disorders, multiple
• Fixation of ossicles	sclerosis, blood dyscrasias

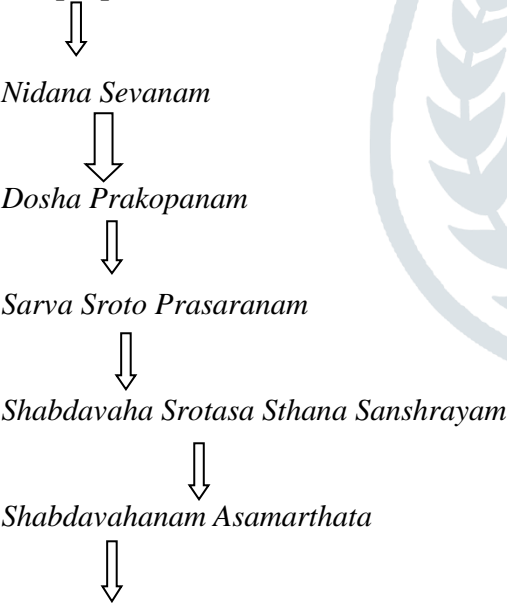
- Eustachian tube blockage

Chikitsa

Acharya Sushruta has mentioned general line of treatment for *Karnaroga*. It comprises of *Snehana*, *Swedana*, *Ghritha pana*, *Rasayana Sevana*, not to do excessive work, to take bath except head, not to indulge in intercourse, not to talk excessively¹⁵. Acharya Charaka¹⁶ and Acharya Vagbhata¹⁷ had advocated daily *Karnapurana* to avoid the diseases of the ear. Treatment modalities mentioned for *Badhirya* are *Snehavirechana*, *Raktamokshana*, *Bastikarma*, *Murdhhabasti*, *Nasya*, *Dhupana* etc¹⁸. According to Acharya Vagbhata poor hearing associated with *Sopha* and *Kleda*, should be given *Vamana* therapy¹⁹. Deafness found in *Bala*, *Vridha* and that persisting for a long time is not treatable²⁰.

According to modern science treatment of hearing loss depends on the specific cause if known as well as the extent, type and configuration. Most of hearing loss resulting from age and noise are progressive and irreversible. Some types of hearing loss, mainly conductive types, can be medically or surgically corrected but others cannot. Commonly used treatment modalities for sensorineural hearing loss are properly fitted hearing aids, cochlear implants and other assistive devices.

Samprapti



Karna Badhirya	
Samprapti Ghataka	
Nidana	Vata & Kapha Prakopaka
Dosha	Vata
Dushya	Rasa
Srotasa	Shabdavaha
Sroto Dusti	Vimarga Gamana
Dosha Marga	Bahya

including *Snehana*, *Swedana*, *Virechana*, *Vamana*, *Nasya* and *Rasayana*.

Ahara Dravyas predominant in *Guru Guna* and which leads to increase in *Kapha* should be avoided. Head bath, vigorous brushing of teeth, physical exertion, exposure to humid climate, scratching the ear etc. should also be avoided.

DISCUSSION

Aacharya Sushruta has mentioned the disease *Badhira* under the caption of *Karnagata Roga*. The vitiated *Vata Dosha* or *Vata Kapha Doshas* by deranging or obstructing the *Shabdavaha Srotas* (auditory canal) or *Shabdavaha Sira* (vessels) and *Shabdavaha Nadi* (nerves) or neglecting *Karnanada* etc. diseases causes difficulty in hearing or incapability of hearing i.e. *Badhira*. Therefore *Badhira* can be of three types-



Table 2 Types of <i>Badhira</i> Sr. No.	<i>Dosha</i> predominance	Involvement of ear parts	Types of deafness
1	<i>Kaphanubandha</i>	<i>Bahya Karna</i> (External Ear) <i>Madhya Karna</i> (Middle Ear)	Conductive
2	<i>Vatanubandha</i>	<i>Antah Karna</i> (Internal Ear) <i>Shabdavaha Nadi</i> (Cochlear Nerve and higher center)	Perceptive (Sensorineural)
3	<i>Kaphavatanubandha</i>	<i>Bahya Karna</i> (External Ear) <i>Madhya Karna</i> (Middle Ear) <i>Antah Karna</i> (Internal Ear) <i>Shabdavaha Nadi</i> (Cochlear Nerve and higher center)	Mixed

Kapha. In addition medicine is used as luke warm, so it has beneficial effect not only on *Vata* but also removes *Avarana* of *Kapha*, thereby helps in reducing *Badhira*. In all types of *Karna rogas*, *Ghruta Pana* is indicated according to *Ayurvedic* classics. *Ghruta Pana* comes under internal *Snehana*. With the administration of *Snehana dravyas*, the *Vayu* is eliminated & *mridutva* in the body is produced. The vitiated *Doshas*, which obstructs the *srotas*, are eliminated with the help of *snehana*²⁴. It is explained that *Nasa* being doorway to *Shirah*, the drug administered through nostrils reaches *Sringataka* by *Nasa Srota* and spreads in the *Murdha* (Brain), taking routes of *Netra* (eyes), *Shrotra* (ears), *Kantha* (throat) *Sira Mukhas* and removes the morbid *Doshas* from *Urdhwajatrugata* completely just like the removing *Munja* grass from its stem²⁵. *Nasya* therapy helps in removal of *Srotas* obstruction and *Shamana* of vitiated *Doshas*. Before the *Nasya* and *Karnapurana*, *Sthanika Abhyanga* and *Swedana* is given which helps in stimulation of vasodilator nerves which are spread out on the superficial surface of face, this increases the blood circulation to the brain. As mentioned earlier, *Badhira* occurs due to vitiation of *Vata* and *Kapha* – *Pitta- Rakta Doshas* which resides in *Shabdanuvaha Sira* and as per *Acharya Susruta*, in *Siragata Vata Raktamokshana* is indicated. Therefore *Raktamokshana* can be an effective therapy in *Badhira*. *Basti* is main treatment modality for *Vataja Roga* and *Badhira* is *Vata* dominant disease. Similarly *Shirobasti* helps in pacifying *Vata Dosha* by giving strength to the nervous system.

CONCLUSION

It can be concluded that hearing loss of modern science comes under the caption of *Badhira* in *Ayurveda*. Considering the limitations of treatment in cases of sensorineural hearing loss, presbycusis, and other varieties of mild to moderate deafness, above mentioned *Ayurveda* treatment modalities of *Badhira* may prove beneficial.

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