

A REVIEW ON ROLE OF *VACHA ARKA KARNAPOORANA* IN *BADHIRYA* W.S.R TO SENSORY NEURAL HEARING LOSS

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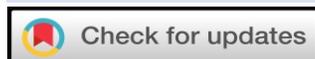
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ABSTRACT

Ear is a very important sensory organ of hearing. Loss of hearing has a very negative impact on one's social, professional and personal life. According to WHO (1st March 2020), there are over 5% of the world's population are suffering from hearing loss. It is estimated that by the year 2050, 1 in every 10 people will have hearing loss. There are many modern interventions which have been used nowadays like hearing aids, etc. But it is not possible for everyone to afford such treatment. To provide effective and alternative treatment for the betterment of society with simple and less expensive local administrative treatment with the help of *Ayurvedic* modalities i.e. *Karnapoorana* (instillation of medicated volatile oil into external auditory canal) of *Bilwa Taila* (Bilwa oil), *Katu Taila* (Katu oil), *Arka* (volatile oil), etc. *Arkas* are prepared by the combination of *Jala* (water) and *Agni* (fire) and it assimilates in the body very quickly, hence it can be used in the management of *Badhirya* (dwindle hearing). Considering all this, the study is planned for the Evaluation of *Vacha Arka Karnapoorana* in *Badhirya* W.S.R. To Sensory Neural Hearing Loss.

Keywords: Sensorineural hearing loss, *Vacha Arka*, *Badhirya*, *Karnapoorana*.

INTRODUCTION

Urbanization is improving the standards of living but at the cost of environment and health. It has woven an intricate web where one cannot live without getting exposed to sound pollution, air pollution, etc. All these have a negative impact on one's life. Sound pollution is increasing day by day and is unavoidable. The use of earphones, loud music, crackers, noise pollution by factories and industries, road traffic, etc. all these are unavoidable and is a part of one's daily life. Coming in contact with all these every day and for a long period of time can cause reduced hearing. According to WHO (1st March 2020), there are over 5% of the world's population, ie; 466 million people who are suffering from hearing loss. Amongst them 432 million are adults and 34 million are children. It is estimated that by the year 2050 over 900 million people or 1 in every 10 people will have hearing loss [1]. Hearing loss is the result of damage to the hair cells within the inner ear, the vestibulocochlear nerve or central processing centers of the brain is called sensorineural hearing loss (SNHL) [2]. The prevalence of reduced hearing is increasing day by day worldwide as the cause is mostly unavoidable. Neglecting such condition and not avoiding the contact with etiological factors can lead to severe deafness in future. In modern, steroids, hearing aids, implants, etc. are given. In *Ayurveda* classics, *Badhirya* is mentioned as one of the *Karnagata Rogas* which is caused due to *Vata* and *Kapha Doshas*. In *Arka Prakasha* by *Ravana*, *Vacha Arka Karnapoorana* should be used in such cases which have an immense therapeutic value in sensorineural hearing loss [3]. *Vacha* is having *Tikta-Katu Rasa*, *Ushna Virya* And *Katu Vipaka*, *Laghu Tikshna Guna* and *Prabhava* is *Medhya* and it does therapeutic actions like *Lekhaniya*, *Kapha-Vatahara*[4], *Deepana*, *Pachana*, *Shulaghna*, *Jantughna*, *Kanthya*, *Mukhrogahara*, *Swaraprada*, *Unmadarogahara*, *Apasmarahara*, *Jwaraghna*, *Bhutaghna*[5], *Kaphaghna*, *Vataghna*, *Krimighna*, *Sanjnasthapana*[6], *Sheetaprashamana*, *Shirovirechana*, *Tiktaskandha* & *Triptighna*. *Vacha* acts as *Kaphaghna* due to its *Katu*, *Tikta* & *Ushna Guna* and it acts as *Vataghna* due to its *Ushna Guna*. *Vacha* does *Vedanasthapana*, *Shothahara*, etc actions.

Arkas are prepared by the combination of *Jala* and *Agni* therefore it has the qualities like *Vyavayi*, *Vikasi* and *Laghupaki* and also assimilates in the body very quickly, hence it can be used in the management of *Badhirya*. Therefore, it has a very good therapeutic value in sensorineural hearing loss.

Mode of Action of Vacha Arka

Karnaabhyanga (Massage on preauricular and postauricular region of ear)

Tailas (oil) are used for *Karnaabhyanga* (ear massage) on preauricular and postauricular region of ear. *Murchhita Tila Taila* is one of the commonest used *Taila* for *Karnaabhyanga*. *Abhyanga* (massage) is done for a sufficient time so that the drugs get absorbed into the *Dhatus*. *Taila* is having many properties like *Guru*, *Sara*, *Sukshma*, *Vyavayi*, *Vikasi* and *Vishada Guna*. By virtue of its properties, it enters into deeper structures and increases the blood flow. Before *Karnapoorana*, *Karnaabhyanga* should be performed in *Murdha Pradesha*. The *Taila* gets absorbed in to the skin, does vasodilation which increases the blood flow and helps in detoxification. It stimulates the muscles by stimulating receptors of sensory nervous system. *Acharya Sushruta* explained the mode of action of *Abhyanga* as *Bahya Snehana*. On this, *Dalhana* [7] has commented that there are four *Tiryak Dhamanis*, and each divides into branches numerous times. The opening of these branches are attached to *Romakupa* and cover the body like a network. The *Virya* of the drug gets absorbed into the *Tvak* after undergoing *Paka* by *Bhrajaka Pitta* present in the skin, from there it enters into the body and produces desired therapeutic action [8]. According to *Ashtanga Hridaya*, *Vayu* is dominant in *Sparhendriya* [9]. According to *Ashtanga Hrudaya*, *Shrotra* is the seat of *Vata* [9] and *Karna Badhirya* is caused by vitiated *Vata*. Thus, *Karnaabhyanga* helps to pacify the localized vitiated *Vata*.

Swedana (Sudation Therapy)

The mechanism of *Swedana Karma* consists of softening of channels from which the *Vatadi Doshas* can flow in their normal direction and also helps in *Vata Shamana*. It has properties like *Ushna*, *Snigdha*, *Sukshma*, etc., which helps in alleviation of vitiated *Vata* and

improves blood circulation. It enters deeper structures and increases the microcirculation and loosens the *Ama* that are stuck in the channels. *Badhirya* is due to *Vata Dosh*, therefore it helps in improving the auditory functions.

Karnapoorana (Instillation of Medicated Volatile Oil into External Auditory Canal)

According to *Ashatanga Hridaya*, the seat of *Vata* is *Shrotra* [9]. And *Badhirya* is caused due to vitiation of *Vata Dosh*. *Karnapoorana* does *Vata Shamana* of the *Shrotra*. With the help of *Purvakarmas* (*Abhyanga* and *Swedana*), *Sanga* and *Vimarga Gamana* of *Vata Dosh* is alleviated and circulation and nutrition is enhanced locally.

The lukewarm *Arka* is instilled into the ear and kept for 100 *Matrakalas*. It enters into the *Shabdavaha Srotas*, from there it enters into the channels of *Srotas* and cleanses them. *Vacha* consist of *Lekhniya* properties from which it scraps out the toxins (*Ama*) from the minute channels at the cellular level. All these *Shodhana* properties of the drug alleviates the vitiated *Dosh*s. With the help of *Karnapoorana*, *Shamana* of *Vata Dosh* occurs and blood circulation is improved. According to an article [10], after *Karnaabhyanga* and *swedana*, the lukewarm *Arka* is instilled in the ear, from there it absorbs into seven layers of skin and enters into the blood circulation. From there, the effect of drug reaches the target area. The *Arka* is instilled on lateral decubitus from where it stimulates the semicircular canal which improves the endolymph circulation and provides nourishment to the hair cells [11]. *Vacha Arka* gets absorbed through the epithelium of external auditory canal and tympanic membrane and from their it gets spread into *Rasa* and *Rakta Dhatu* through its *Tikshna* and *Ushna* properties. It can be ruminated that the drug gets absorbed into the epithelium of external auditory canal and tympanic membrane and spreads into the systemic circulation after which drug target organ action occurs.

DISCUSSION

As the seat of *Vata* is *Shrotra* and *Karna Badhirya* is caused by vitiation of *Vata Dosh*, *Ushna* and *Tikshna*

properties of *Vacha Arka* penetrates in the deeper tissues and alleviates the *Vata Dosh*. *Vacha* has *Medhya Prabhava* and does actions like *Vedanasthapana*, *Shothahara*, *Lekhaniya*, *Shirovirechaka*, *Sanjnyasthapana*, etc. which are very useful and should be evaluated more in curing many more symptoms and diseases. According to an article [12], rhizome of *Vacha* consist of α -asarone which does anti-inflammatory & immunomodulatory effects. Antioxidant effect of *Vacha* comes from its rhizome whose extract consist of ethyl acetate, ethanol & methanol. *Vacha* also works as cardioprotective due to its rhizome extracts consist of crude, n-hexane and ethyl acetate. *Vacha* acts as anti-depressant & mainly it has neuroprotective properties like ethanol, methanol, acetone & β -asarone which are very useful in treating sensorineural hearing loss and its associated complaints as well.

CONCLUSION

In every ear disorder, *Vata Dosh* is mainly afflicted. Hence it is very important to maintain the equilibrium. *Vacha Arka* is having *Ushna*, *Tikshna*, *Vatahara* properties which normalizes the *Dushita Vayu*, thereby improving the mechanism of Hearing.

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