

AYURVEDIC MANAGEMENT OF TINNITUS - A CASE STUDY

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INTRODUCTION

Tinnitus is defined as a phantom auditory perception- without corresponding acoustic or mechanical correlates in the cochlea.¹ 70–80% of individuals with tinnitus have significant hearing difficulties². The sounds associated with most cases of tinnitus have been described as being analogous to cicadas, crickets, winds, falling tap water, grinding steel, escaping steam, fluorescent lights, running engines, Hissing, ringing etc. Tinnitus severely impairs quality of life of about 1–2% of all people. If tinnitus persists for more than 2 years, it is considered permanent and irreversible.³ Tinnitus is regarded as a sub cortical perception resulting from the processing of weak neural activity in the periphery⁴. The risk factors include female sex, smoking history, sleep of ≤ 6 h, stress, smaller households, hyperlipidemia, arthritis, asthma, depression, thyroid disease, an abnormal tympanic membrane, unilateral and bilateral hearing loss, noise exposure at and outside the workplace etc⁵. No effective drug treatments are available, although it is being managed with pharmacotherapy, electrical suppression, cognitive and behavioral therapy, sound therapy, habituation therapy, massage and stretching and hearing aids. In our science, it is considered as *Karnanada* which happens when *vata* gets localized in the *siras* or channels which convey sound. The sounds may vary and may be constant or

intermittent. If left untreated, it may gradually give rise to hearing difficulty even for loud sounds and ultimately to deafness. The general etiology of *karna rogas* are *vata* provoking factors grouped as those creating *atiyoga* or *mithya yoga* of the sound like exposure to loud noise etc., injury to auditory pathway by endogenous or exogenous factors and those obstructing auditory pathway like recurrent otorrhino laryngological infections, impacted wax etc. Senility is also one of the etiologies. *Dhatukshaya* or cell degeneration in the level of end organs of hearing is the main pathological process involved. The management for this condition is aimed to attain *vataharatwa* through *snehana*, *swedana* and *sodhana*, local measures like *karnapoorana*, *murdha tailas* etc. and rejuvenation of tissues via *rasayana* therapy.

Considering all these factors, a treatment protocol was designed which was aimed at 1) Symptomatic improvement 2) Progression arrest 3) Rejuvenation of damaged or degenerated nerve cells. This integrated approach was found very effective in this case.

CASE REPORT

A 64-year-old male (M R No:58945) presented to Shalakya O.P.D of Ahalia Ayurveda Medical College with the complaints of hissing sound and

reduced hearing in both ears (more in right), since 7 months immediately after his visit to United States. Tinnitus was constant and more aggressively felt in quiet surroundings which even disturbed his sleep. The patient wasn't having any systemic illnesses. Informed consent was taken prior to treatment.

Past history and family history- nothing relevant.

Treatment history –went for allopathic treatment and no cure for the condition was told.

On examination

Local examination of the ear showed [Table 1] the pinna, external auditory canal and tympanic membrane bilateral as normal. On tuning fork test, air conduction greater than bone conduction on both sides; but the perception in right ear was

comparatively less. Weber's lateralised to left ear. ABC(Absolute Bone Conduction) Test showed reduced perception in Right ear which was interpreted as sensori-neural hearing loss. On pure tone audiometric examination, the case was diagnosed as moderate mixed hearing loss more towards sensori-neural in right and mild hearing loss in left. [Table 2]. Lab investigations showed Fasting Blood Sugar-84 mg%, Serum cholesterol-202 mg%. Rest hematological and Lipid profile were within normal limits.

The severity of tinnitus was assigned before and after treatment using **Klockoff and Lindblom** grading system⁶ and **Tinnitus Handicap Inventory Questionnaires (THI)**⁷

Table 1: Local examination of ear

PART	RIGHT	LEFT
1) Pinna-shape, size and colour	Normal	Normal
2) external auditory canal	Normal	Normal
3) tympanic membrane	Normal	Normal
4)Tragus sign	Negative	Negative
5)pre and post auricular lymph nodes	Not enlarged	Not enlarged

Internal medicines administered to the patient.

1. *Mahakalyanaka ghritam* -50 ml as *Samana snehapana* -7 days.
2. *Brahma rasayana* 20 g after food
3. *Mahavata vidhwamsa rasa* 125 mg tab 1 tds

After 7 days, hot water bath was advised and following that *Virechana* was done with *Gandharva hasta eranda* 25 ml in milk at 7 am. Total 7 vegas attained. After *Samsarjana karma*, the remaining procedures were started.

Procedures administered to the patient

The patient was administered *Nasya* with *Ksheerabala Taila* 101(A) 2.5 ml each nostril in the morning time and *Karnapurana* using *Sarshapa taila* in the evening once daily for 7 consecutive days. *Sirodhara* was done afterwards with *Balawagandhadi taila* for 15 days. *Nasya* was done following classical method which included local *abhyanga* and *swedana* as *poorvakarma* and

dhumapana and *kabala as paschat karma*. *Sirodhara* and *Karnapurana* were also done as per classical texts.

Pathya (Do's) –Advised to take light, warm and easily digestible diet and to have adequate rest to the sense organs.

Apathya (Don'ts) - Advised not to take head bath, not to speak too loudly, drink cold water, exposure to cold wind, exercise etc.

RESULTS

Patient started noticing symptomatic relief after 3 days of *nasya* and *karnapurana*. The tinnitus was reduced by 3 weeks and subjective improvement in hearing was observed at the time of discharge. The patient was able to hear sounds more clearly especially during phone calls and tinnitus became feeble (sometimes audible and that too in very silent atmospheres) Moreover he began to have sound sleep. With a follow-up for a period of 3 months, the

patient had a marked improvement in tinnitus and hearing [Table2,3]. Meanwhile, his internal

medicines excluding tablets were continued during the follow up period also.

Table 2-Hearing level in decibels(dB) before and after treatment

	Before Treatment	After Treatment
Frequency Hz	250 500 1K 2K 4K 8K	250 500 1K 2K 4K 8K
R-Air	60 60 30 40 45 45	15 20 15 30 25 45
R-Bone	35 35 30 45 40 -	10 15 15 20 10 -
L-Air	15 20 25 35 45 40	10 15 20 40 40 20
L-Bone	0 10 20 30 40 15	10 15 15 30 20 -
Pure Tone Audiometry		
RIGHT EAR	41.6 dB	21.66 dB
LEFT EAR	26.6 dB	25 dB

Impression- Before Treatment - moderate mixed hearing loss more towards sensori-neural in right and **mild** hearing loss in left.

After Treatment - Bilateral Minimal hearing loss with mild loss at High frequency.

Table 3: Severity of Tinnitus.

Score/Grade	Before treatment	After treatment
Klockoff and Lindblom tinnitus grading	Grade 3	Grade 1
Questionnaire (THI) Score	46 (Moderate)	14 (Slight)

DISCUSSION

Psychiatric disorders are the most severe side effects resulting from chronic tinnitus.⁸The degenerative changes that occur in the cells of organ of corti (receptor organ of hearing) and nerve fibers result in a slow, progressive deafness which may be associated with tinnitus.⁹

Mode of action

Procedures upto *virechana* were done for general purification so as to have better oral drug absorption and also helped in attaining *indriyabala*, *dhatu shiratha*, *agni deepthi* and *buddhi prasada*.¹⁰ *Gandharva eranda* was selected considering the *dosha* predominance.

Nasya was done with *Ksheerabala 101(A) taila* which is said to possess *Indriya prasada*, *jeevana*, *brimhana* properties and is the best *rasayana*.¹¹ Also daily application of *Nasya* will help in attaining *dridha indriya* and longevity.

Karnapurana does the *vatashamana* and enhances the normal hearing capacity. *Sarshapataila* was used for *karnapurana* as indicated by *Vagbhata* and *Yogaratanakara*, also taking into consideration the mixed nature of deafness. *Sarshapataila* exhibits *ushna veerya*, *teekshna guna* and *kapha vata hara* action.¹²

Shirodhara is said to provide stability to body and tissues, functional integrity to sense organs, strength, complexion and delays senile changes¹³. *Balashwagandhadi* contains *laksha* in addition to the title drugs and is indicated in *kshaya* and various *vata vyadhis*.

Oral medication

Mahakalyanaka ghrita is having *brimhana* and *sannipatahara* property and is more potent than *kalyanaka* in properties like enhancing *medha*, *smriti*, *mandagni*, *bala* and *ayu*. Hence it is suitable for senile diseases also.¹⁴ *Brahma Rasayana* contains

haritaki, amalaki and *panchapanchamoolas*; all of which are *rasayanas* and is indicated in senile changes like *vali, palitha srama, klama* etc and boosts *medha, smriti* and *bala*.¹⁵ *Mahavata vidhwamsa rasa* is a *kharaleeya rasayana* told in *Rasatantrasara* that mainly contains *Shuddha parada, gandhaka, naga, vanga, lauha, tamra* and *Abhraka bhasma* and is used in treating *vata vyadhi* and related neurological diseases. All these might have contributed to the improvement in sensori neural hearing loss and prevented further deterioration of this condition.

CONCLUSION

This study clearly shows that there will be significant improvement in tinnitus and hearing difficulty if it is managed in the classical line of treatment and there were no adverse effects seen throughout the treatment. Thus, this paper aims at providing a treatment strategy for the management of psychologically annoying tinnitus which is effective in symptom relief and also contributes for the betterment of quality of life.

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