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 difficulties. 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 periphery. 4) 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 etc. 5) 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 sīras 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 karma 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 otorhinolaryngological 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, mudra 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 system and Tinnitus Handicap Inventory Questionnaires (THI).

**Table 1:** Local examination of ear

<table>
<thead>
<tr>
<th>PART</th>
<th>RIGHT</th>
<th>LEFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Pinna-shape, size and colour</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>2) external auditory canal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>3) tympanic membrane</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>4) Tragus sign</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>5) pre and post auricular lymph nodes</td>
<td>Not enlarged</td>
<td>Not enlarged</td>
</tr>
</tbody>
</table>

**Internal medicines administered to the patient.**
1. **Mahakalyanaka ghritam** -50 ml as Samana snehapan -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 Balaswagandhadi taila for 15 days. Nasya was done following classical method which included local abhyanga and swedana as poorvakkarma and dhumapan 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

<table>
<thead>
<tr>
<th>Frequency Hz</th>
<th>Before Treatment</th>
<th>After Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>250  500  1K  2K  4K  8K</td>
<td>250  500  1K  2K  4K  8K</td>
</tr>
<tr>
<td>R-Air</td>
<td>60   60   30  40  45  45</td>
<td>15   20   15  30  25  45</td>
</tr>
</tbody>
</table>
| R-Bone       | 35   35   30  45  45  45 | 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**

<table>
<thead>
<tr>
<th></th>
<th>Before Treatment</th>
<th>After Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIGHT EAR</td>
<td>41.6 dB</td>
<td>21.66 dB</td>
</tr>
<tr>
<td>LEFT EAR</td>
<td>26.6 dB</td>
<td>25 dB</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Score/Grade</th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klockoff and Lindblom tinnitus grading</td>
<td>Grade 3</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Questionnaire (THI) Score</td>
<td>46 (Moderate)</td>
<td>14 (Slight)</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Psychiatric disorders are the most severe side effects resulting from chronic tinnitus.\(^8\) The 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 sthiratha, 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 prasadana, 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. Sarshapatala was used for karnapurana as indicated by Vagbha and Yogaratnakara, also taking into consideration the mixed nature of deafness. Sarshapatala 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 changes.\(^13\)

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 samnipatahara 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. 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 vatavyadhī 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.

REFERENCES


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