“A CLINICAL STUDY OF APAMARGAKSHARA TAILA KARANPOORANA AND GHритA PAANA IN THE MANAGEMENT OF KARAN NAAD W.S.R. TO TINNITUS”

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ABSTRACT

Key Words:
Karnanada, APAMARGAKSHARA TAILA, GO Ghrita, Tinnitus

Aacharya Sushruta has explained twenty eight types of Karna Rogas and Karana-naada is one of them. Vitiates Vata Dosha either entering into other channels (Vimarga Gamana) or encircled by Kaphadi Doshas (sangam) in Sabdavaha Srotas produces different types of sounds in the ear like Bheri, Mrudanga, Shankha etc. is known as Karna Nada. The clinical features of Karnanada relates to Tinnitus in modern science. The present study was conducted to evaluate the effect of APAMARGAKSHARA TAILA Karanpurna and GO Ghrita Paana in the management of Karna Naad W.S.R. to Tinnitus. Total 10 patients were registered in single group and all patients completed the trial. The trial was conducted for 30 days and effect of drugs was evaluated. The analysis based on subjective improvements reveals that 5 patients were moderately improved, 4 patients were mildly improved while 1 patient was having no improvements. No adverse effect was seen during the trial and in the follow up as well. The study revealed that APAMARGAKSHARA TAILA Karanpurna and GO Ghrita Paana plays a vital role in the management of Karna Naad W.S.R to Tinnitus.
INTRODUCTION

The term Karnanada is basically derived from two root words karna and Nada.
Karna – The organ of hearing.
Nada – Sound or ringing in the ear.
Karna is one of the Adhisthana of Vata-Dosha and according to Acharya Charaka, Karnanada is a Vataja Nanaatmaja Vyadhi and mainly Vata predominant causative factors are responsible for Karnanada. Snehana becomes important to control the localised increased Vata Dosha.

Karnapoorana - Karna being one of the Adhisthana of Vata-Dosha, Snehana becomes important to control the localised increased Vata Dosha. Hence, Karnapoorana gains importance in the management of Karnanaad-Vata predominant diseases. Ghritapana- Ghrita having property “Samskarasya Anuvartanatva”. When processed with Vatashamaka drugs and having Rasayana Guna becomes the best line of treatment for Karnanada. Hence GO Ghrita was selected. The term 'tinnitus' stems from the Latin tinnire meaning to ring, and was introduced by Pliny the Elder. “Tinnitus - a noise in the ears, such as ringing, buzzing, roaring or clicking”. Tinnitus may be defined variously as a sound perceived for more than five minutes at a time, in the absence of any external stimulation of the ear and not occurring immediately after exposure to loud noise’ ‘phantom auditory perception’ or ‘head noise’.

Tinnitus can be perceived in one or both ears or in the head.

Aims & objectives

The present study has been planned to accomplish the following aims and objectives:

1. Clinical evaluation of combined therapy of APAMARGAKSHARA TAILA and GO Ghrita on Tinnitus.
2. To develop evidence based support for effect of APAMARGAKSHARA TAILA and GO Ghrita in Tinnitus as mentioned in our ancient literature and also to analyze the observations and to find the significance of the drug action.

MATERIALS & METHODS

The patients suffering from Karn Nada -tinnitus were randomly selected from O.P.D. of shalakya department of BHARATI VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE (INDIA) COLLEGE OF AYURVEDA PUNE-411 043

Criteria for inclusion

Patients were selected on the basis of symptoms of Karnanada - tinnitus described as per Ayurvedic and modern literature.

Criteria for exclusion

2. Blockade due to stenosis of external auditory canal/wax.
3. Established diabetes mellitus and hypertension.
4. Pregnant, immune compromised patients.
5. Patients not willing to be registered for the trial.
6. Cases which required surgical intervention.

Stimulation of the ear and not occurring immediately after exposure to loud noise’ ‘phantom auditory perception’ or ‘head noise’.

Investigation: The following laboratory investigations were carried out to assess the condition and to exclude any other pathologies of the patients.

1. Haematology : Hb%, TC, DC, ESR, Lipid profile.
2. Otoscopy.
3. Tuning fork test.
4. Audiometry.

Plan of work: The study was planned in different steps as mentioned below.

Proforma: A special proforma was prepared to maintain the records of the entire observations regarding the disease.
Grouping & Posology

All the selected patients fulfilling the criteria were taken in single group (10 patients):

**APAMARGAKSHARA TAILA**\(^4\) - for karan purna

- Dose: 2 ml each ear
- Time: Twice a day
- Duration: 30 matra uchharan kala

**GO ghrita**\(^5\) - Orally

- Dose: 10 gm twice a day
- Anupana: Sukhoshna Jal
- Duration of trial: 1 month

Follow up

- Two follow up at every 10 days during treatment.
- One follow after completion of trial.

Criteria for assessment

The effect of treatment would be assessed by asking following questionnaire form the patients:

**Tinnitus Severity Index Questionnaire**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Criteria</th>
<th>Mean score</th>
<th>± SD</th>
<th>±%age</th>
<th>Difference</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TSIQ</td>
<td>10 17.1</td>
<td>9.6</td>
<td>7.55</td>
<td>2.0680</td>
<td>43.89</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>2</td>
<td>Hearing</td>
<td>49 46.5</td>
<td>2.5</td>
<td>5.1</td>
<td>1.1182</td>
<td>2.236</td>
<td>0.089</td>
</tr>
<tr>
<td>3</td>
<td>Hearing</td>
<td>62.5 59.16</td>
<td>3.33</td>
<td>1.236</td>
<td>3.0281</td>
<td>2.697</td>
<td>0.043</td>
</tr>
</tbody>
</table>

Effect of Therapy

Effect of **APAMARGAKSHARA TAILA and GO Ghrita** on Symptoms of Karnanada

Mild -1 – 9
Moderate -10 – 18
Marked -19 - 27
Effect of Therapy on TSIQ

Patients treated with; APAMARGAKSHARA TAILA Karna Poorana, Go Ghrita Paana the mean score of TSIQ, before treatment was 17.1 and after treatment it came down to 9.6 giving 43.89% relief which was significant statistically (p<0.001).

Effect of Therapy on Hearing loss

Patients treated with; APAMARGAKSHARA TAILA Karna Poorana, Go Ghrita Paana the mean score of Hearing loss in Rt ear, before treatment was 49 which it came down to 46.5, giving 5.1% relief which was statistically insignificant (p=0.089) and in Lt ear, before treatment was 62.5 which it came down to 59.16, giving 5.32% relief which was statistically significant (p=0.043).

Over All Effect of Therapy on TSIQ

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Assessment</th>
<th>Single Group</th>
<th>No. of patients</th>
<th>%age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cured</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Markedly Improved</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Moderately Improved</td>
<td>5</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Mild Improved</td>
<td>4</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Unimproved</td>
<td>1</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

Probable Mode of Action

Karnanada is a Madhyyama marga gata Vata Vyadhi in which Prakupita Vata dosha settles in Shabdavaha Shrotas as a result of Vimargagamana. Hence the drugs need to have Vatadhara properties in order to normalize vitiated vata dosha. Snehana is described as an important procedure in treatment of vata dosha.

APAMARGAKSHARA TAILA is used for snehana in form of karnapoorana. APAMARGAKSHARA TAILA mainly contains ushna virya (65.78%) drugs and til taila is its main ingredient which is considered best for treatment of vata.

Til Taila is an essential analgesic and useful for wound healing, skin, ear, dental and hair problems, useful in dryness by acting as Vatashamak. Local application of oil pack in ear reduces pain.

Research shows that sesame seed oil used for Abhyanga is a potent antioxidant (due to presence of vit.E). In the tissues beneath the skin, this oil will neutralize oxygen radicals. Magnesium supports vascular health. Sesame oil used for Abhyanga & Karnapoorana contains magnesium, copper, calcium, iron, zinc, and vitamin B6. As Magnesium and zinc supplements can help restore stability to inner ear. It may be absorbed by Abhyanga & Karnapoorana. Til Taila having madhur rasa, guru-snigdha guna and ushan virya.

Apamarga has vata shamaka property due to its madhur rasa, madhur vipaka and ushana virya. Rasa Panchak of Apamargakshar Tail having ushan virya (67.58%) and Vatakapha shamaka property. Above mentioned properties of these ingredients of Apamargkshar Taila makes it potent in alleviating Vata dosha which is responsible for Karananada.

Karnapoorana is conducive to the nutrition of the skin and the softness of the muscles. It penetrates into the skin quickly and enters the blood stream, through the capillaries & supply nutrition to nerves. It has a unique quality of getting absorbed easily by the pores in the skin and thereby acts as a catalyst. GO ghrita

All ingredients consists of Madhura rasa which helps in alleviating the kshya of dhatus occurred as a result of vata dosha. Madura rasa alleviates vata
dosha and nourishes different dhatus thereby reducing the symptoms of vata kshya.

GoGhrita: having “Samskarsya Anuvartanatva” (Cha.Su.13/13) property when processed with Vatashamaka drugs and having Rasayana Guna becomes the best line of treatment for Karnanada. Hence GO Ghrita was selected. Ghrita is vata pittashamaka, Balya, Agnivardhaka, Madhura, Saumya, Sheeta virya, vrishya and Vayasthapaka also. Thus, it pacifies vata, improve the general condition of the body and acts as a rejuvenator of the body. Thus, helps in the Samprapti Vighantana of the Karnanada.

The protective effect of Go Ghrita is conceive to be at both the levels:

- At CNS (Cochlear nerve).
- At Hair Cell

On CNS it can be through its GABAergic modulation (an important neurotransmitter) as well as its role to CONCLUSION

Analysis of the study reveals that Karnanada is a disease which mostly affects the people who are having vishamagni and incidence increases with age both conditions are vata dominant conditions and impaired digestion which is due to predominance of Vata Dosha which further result in Dhatukshaya due to improper nutrition. This disease is more common in upper middle class and illiterate people who are more attentive towards their mental and physical health, because tinnitus effects the mental status of a person.

Drugs used in single group, in which result of Apamarkshar Tail and Go Ghrita Paana was highly significant according to TSIQ and was insignificant in hearing loss in Rt. ear and significant in Lt. ear.

CONCLUSIONS


increase in acetylcholine receptor activity and stimulating the growth of axons & dendrites of nerve cells.

On hair cell level it may affect by its active constituents like withaferin A \(^{11}\) and sitoindosides VII \(\times^{10}\) which are reported to have an anti-oxidant activity by reducing lipid peroxidation.

Balya, Brimhana, Rasayana and Medhya effect of ghrita can be explained by two ways

Digestion, absorption, and delivery to the target organ is made easy when any drug is processed with ghrita due to its lipophilic action. Anti-oxidant effect of ghrita is due to its vitamin-A & E content.

This suggests that GO ghrita helps in lowering down the degenerative changes occurring at cellular level and empowering the function of sensory organs (may enhances the normal hearing).

References