

**ROLE OF BILVA TAILA KARNA POORANA WITH AND WITHOUT
ASHWAGANDHADYA GHRITA IN THE MANAGEMENT OF KARNA NADA AND
KARNA KSHVEDA W.S.R. TO TINNITUS**

PARTH PRAKASHBHAI DAVE, D. B.VAGHELA, K. S. DHIMAN, HIRAL BRAHMABHATTA
¹ Ph.D(Ayu.) scholar, ²Assistant Professor Dept. of Shalakyta Tantra, I.P.G.T. & R.A.,
Gujrat Ayurveda University, Jammagar, Gujrat, India.
³Director General, CCRAS - New Delhi.
⁴Private consultant physician

ABSTRACT:

Karna Nada & Karna Kshveda (Tinnitus) are the most common complaints encountered in clinical practice of ENT. Tinnitus is derived from the Latin word "Tinnire" which means to ring or tinkle like a bell. It is the perception of sound within the human ear in the absence of corresponding external sound. Prevalence of tinnitus has been observed in approximately one out of every ten people. Vata dominant Tridosha along with Rakta presents as the chief pathological factors in the disease. In this study an attempt has been made to treat the "disease" with Karna Poorana and oral medication. Ghrita having property of "Samskarasya Anuvartanatva" when processed with Vatashamaka Drugs and having Rasayana Guna becomes the best line of treatment for Karna-Nada and Kshveda. Hence, Ashwagandhadya Ghrita was selected. Karna being one of the Adhithana of Vata Dosha, Snehana becomes important to control the localized increased Vata Dosha. Hence, Karna Poorana also gains importance in the management of the disease. Pakva Bilva Majja possessing Vata-Kapha Shamaka properties was taken as the drug of choice to be processed with Vata Shamaka Taila to control Tinnitus. For this study total 31 patients were registered and randomly divided into two groups, Out of which 01 patient discontinued the treatment in group A. The effect of treatment was observed both in chief complaints and associated complaints. On the basis of similarity between some etiological factors, symptoms and treatment modalities tinnitus can be correlated with Karna Nada/ Karna Kshveda. Both the groups have shown highly significant result on Karna Nada & Karna Kshveda.

KEY WORDS: Ashwagandhadya Ghrita, Bilva Taila, Karna Kshveda, Karna Nada, Karna Poorana, Tinnitus.

INTRODUCTION

Correspondent:

Dr. Parth Prakashbhai Dave
1st year Ph.D (Ayu.) scholar,
Dept. of shalaky Tantra,
Gujrat Ayurved University
I.P.G.T. & R.A
Jamnagar, India,

The disorders of *Karna* have been described by all *Acharyas*. While describing *Karna Roga*, *Acharya Sushruta* has explained about *Karna Nada* and *Karna Kshweda*¹ Vitiated *Vata Dosh* either entering into other channels by *Vimarga Gamana* or encircled by *Kaphadi Doshas (Sangam)* in *Sabdavaha Shrotas* (Auditory canal), produces different types of sounds in the ear like that of *Bheri* (kettle drum sound), *Mrudanga* (roaring sensation), *Shankha* (ringing sensation) etc. is known as *Karna Nada* and *Venughosha* (flute like sound) as *Karnakshwedz*².

Tinnitus is one of the common and prevalent ailments which we come in across our daily medical practice. It affects people right from infancy to old age. However, the prevalence of 'clinical tinnitus', i.e. those subjects who are bothered by tinnitus to the extent that they seek medical advice, has been estimated to be about 7.2 percent³; a blind person or a lame person can easily be visualized as a handicap and thus gets sympathy unlike

person suffering from ear problem as his handicap is not noticeable.

Tinnitus is derived from the Latin word "*Tinnire*" which means to ring or tinkle like a bell. It is the perception of sound within the human ear in the absence of corresponding external sound.⁴ It is a ringing, buzzing, whistling, hissing or other noise, heard in the ear during absence of environmental noise. Tinnitus is characterized by annoying ear noises which can be soft as a whistle or loud enough to be completely debilitating. It is not a condition itself; it is a symptom of an underlying condition such as age related hearing loss, ear injury or a circulatory system disorder. Tinnitus can be continuous or intermittent with silence between the episodes.⁵ The origin of this condition is a malfunction in the method whereby auditory signals are processed.

The causes of tinnitus include ageing or exposure to loud noise. Most often it affects people over the age of 40,^{6,7} but it is now being seen more frequently in young people who are exposed to loud, amplified music. Noise that can cause tinnitus with long term exposure occur in the home and at workplace, environment include noise from welding equipments, power saws, vacuum cleaners, power mowers, and some kitchen appliances. It is also due to allergies, diabetes, hypertension, high cholesterol, ear wax,

Meniere's disease. In old age, it is due to the natural degenerative changes in the body, where the hearing is impaired and it is termed as Presbycusis. A rare form of tinnitus is caused by abnormalities in blood vessels around the ear which causes noise when muscles contract in the ear.

The clinical features of *Karna Nada* and *Karna Kshweda* are very similar to tinnitus. Jamnagar is a well known industrial area and has prevalence of the disease. So large number of patients complaining of *Karna Nada* and *Karna Kshweda* (Tinnitus) has been reported in our ENT (*Shalakyas*) O.P.D.

As per modern science tinnitus is difficult to diagnose and treat. Tinnitus "maskers" are helpful to some. This device fits like a hearing aid and is turned on to play sounds at some frequency thus producing a dampening effect on the unwanted noise i.e. Tinnitus. A hearing aid and masker both in combination can also be tried. Low dose of tranquilizers can reduce tinnitus. But all this gives a temporary relief and the recurrence rate is high. In contrast, *Ayurveda* has a systematic line of treatment in the management of *Karna Nada* and *Karna Kshweda*. *Vata* dominant *Tridosha* along with *Rakta* presents as the chief pathological factors in the disease. The treatment in *Ayurveda* for four diseases viz. *Karna Shoola*, *Pranada*, *Karna*

Kshweda, and *Badhirya* are similar.⁸ The treatment regimen as per *Dosha* vitiation to be adopted can be grouped as- *Ghritapana*, *Rasayana*, *Avyayama*, *Ashirasnana*, *Brahmacharya*, *Akatthana*⁹. *Ghrita* having "Samskarasya Anuvartanatva"¹⁰ when processed with *Vatashamaka Drugs* and having *Rasayana Guna* becomes the best line of treatment for *Karna Nada* and *Kshweda*. Hence, *Ashwagandhadya Ghrita* was selected.

Karna being one of the *Adhithana* of *Vata Dosha*,¹¹ *Snehana* becomes important to control the localized increased *Vata Dosha*. Hence, *Karna Poorana* also gains importance in the management of the disease. *Karna poorana* is a method of filling or dropping the medication into the external ear. The use of *Sneha* especially *Taila* helps to subside *Vata Dosha* and clears the *Srotas* of the *Karna*. *Pakva Bilva Majja* possessing *Vata-Kapha Shamaka* properties due to its *Madhura- Kashaya Rasa* and *Ushna Veerya* was taken as the drug of choice to be processed with *Vata Shamaka Taila* to control Tinnitus.

Therefore to study the disease thoroughly and to know the effect of *Karna Poorana* with *Rasayana* a clinical study had been planned to find out the efficacy of *Aswagandhadya Ghritapana*¹² and *Bilva Taila Karna Poorana*¹³ in the

management of *Karna Nada* and *Kshweda* (Tinnitus).

MATERIALS AND METHODS:

Aims And Objectives:

To evaluate the efficacy of *Bilva Taila Karna Poorana* with *Ashwagandhadya Ghrita* on *Karna Nada* and *Karna Kshweda* –Tinnitus.

Selection Of Patients:

The patients suffering from *Karna-Nada* and *Kshweda*-tinnitus were randomly selected from O.P.D. of *Shalaky* department.

Inclusion Criteria:

1. Patients were selected on the basis of signs and symptoms of *Karna Nada* and *Kshweda* - tinnitus described as per *Ayurvedic* and modern literature.

Exclusion Criteria:

1. Patients below the age of fifteen years and above seventy years.
2. Patients suffering from any chronic debilitating diseases like Diabetes mellitus, Hypertension, Koch's etc. and with other ear pathologies.
3. Cases which required surgical intervention.

Plan Of Work: The study was planned in different steps as mentioned below.

1. **Proforma:** A special proforma was prepared to maintain the records of the entire observations regarding the disease.

2. **Investigations:** The following laboratory investigations and tests were carried out to assess the condition and to exclude any other pathology.

(a) Urine analysis: Routine & microscopic.

(b) Haematology: Hb%, TC, DC, ESR.

(c) Lipid Profile : Serum Cholesterol, Serum Triglyceride, HDL.

(d) Otoscopy.

(e) Tuning fork test.

(f) Audiometry.

Preparation of drugs: The trial drugs *Bilva Taila* (*Chakradatta, Karna Roga Chikitsa 57/29*), *Ashwagandhadya Ghrita* (*Chakradatta, Vatavyadhi Chikitsa 22/90*) were prepared in the pharmacy of Gujarat Ayurved University, Jamnagar, as per classical method.

3. Grouping and Posology:

All the selected patients fulfilling the criteria were randomly divided into two groups.

Group -A: *Bilva Taila Karna Poorana* and *Ashwagandhadya Ghrita* internally.

Group -B: *Bilva Taila Karna Poorana* and plain *Go Ghrita* internally.

Dose: *Karna Poorana* - 24-26 drops in each ear for 100 *Matra* (Approx. 5mints). *Ashwagandhadya/ Plain Ghritapana* 10-12 gm.

Time: Evening (*Karna Poorana*) and Night(*Ghrita Paana*).

Duration: 60 days.

Follow -up: One month.

Design of study:

Total 31 Patients were selected from OPD, Dept. of Shalakya, I.P.G.T. & R.A., G.A.U., Jamnagar. Out of which 01 patient discontinued the treatment in group A and remaining 30 patients were divided into two groups; 15 patients in each group.

Criteria For Assessment Of Results:

The clinical trial was assessed for its efficacy on the basis of following subjective and objective criteria.

Subjective:

Relief in symptoms in terms of intensity, frequency and duration obtained in the patients were considered for the assessment.

Objective:

Pure Tone Audiometry.

A. Subjective symptoms were assessed with the help of following scoring pattern:

1) *Karna Nada*:

- 0- No noise in the ear.
- 1- Occasionally noise in the ear.
- 2- Noise affecting routine work and sleep.
- 3- Noise affecting at resting hours.

2) *Badharya*:

- 0- No impaired hearing (0 – 30db).
- 1- 30 to 45db loss.
- 2- 45 to 65db loss.
- 3- 65db and above loss.

B. Objective parameter:

Pure tone Audiometry.

Normal – 0 to 30db.

Mild – 30 to 45db loss.

Moderate – 45 to 65db loss.

Severe – loss of 65db and above.

Statistical Analysis:

The effect of therapy in both the groups was assessed by applying student's paired-'t' test for comparing before treatment and after treatment obtained scores of subjective parameters. The results were interpreted at $p < 0.05$, $p < 0.01$ and $p < 0.001$ significance levels. The obtained results were interpreted as: Insignificant $P > 0.05$, Significant $P < 0.05$,

Significant P < 0.01 , Highly Significant P < 0.001

Ethical Clearance

The study was cleared by the ethical committee of the institute. Written consent from each patient willing to participate before starting the study was

taken. For those patients who were unable to read or write consent of their relative was taken. Patients were free to withdraw their name from the study at any time without giving any reason.

The effect of the therapy was assessed as below: (Table 1)

Cured	100% relief in subjective and objective signs and symptoms
Marked Improvement	76-99% relief in subjective and objective signs and symptoms
Moderate Improvement	51-75% relief in subjective and objective signs and symptoms
Mild Improved	26-50% relief in subjective and objective signs and symptoms
Unchanged	Below 25% relief subjective and objective signs and symptoms

OBSERVATIONS & RESULTS

The maximum i.e. 29.03% patients belonged to 41-50 years. Maximum number of patients i.e. 74.42% were males, Hindus i.e. 100%, and lower middle socio-economical class i.e. 64.52 %, were found in large proportions in the present sample. Maximum patients i.e. 87.10% were married, 61.29% patients were servicemen. Maximum patients i.e. 80.65% were from urban habitat. Maximum i.e. 51.61% of patients were belonging to quiet background. The 83.87% of the patients were having negative family history. Maximum i.e. 77.42% patients were having *Maruta Sevana* as *Nidana*. Maximum i.e. 38.71 % of the patients got

disturbed sleep while 35.48% had delayed sleep. Maximum patients i.e.70.97% were having tension. Majority of patients i.e. 93.55% were vegetarian. Maximum i.e.25.81% patients were found to be addicted to pan-masala while 6.45% were addicted to smoking and 6.45% were addicted sleeping pills and only 3.23% of population was addicted to tobacco.

Maximum patients were of *Vata-Kapha Prakriti* (67.74%), *Rajasika Manasa Prakriti* (58.06%), *Madyama Ahaara Shakti* (83.87%), *Madhyama Jarana Shakti* (80.65%) and *Vishamagni* (61.11%).

Maximum i.e. 100% were having *Karna Nada* and 70.97% were having

Badhirya. Maximum i.e. 54.84% patients were having bilateral tinnitus, 64.52% patients were having moderate type tinnitus and 74.19% patients were having intermittent type of tinnitus. Maximum i.e.

70.97% patients were having gradual onset of tinnitus. Tinnitus aggravated during stress in 83.87% of the patients.

EFFECT OF THERAPY

Table – 2: Effect on chief complaint (*Karna Nada*) & associated complaint (*Badhirya*) in Group-A

Symptoms		Mean Score		%	SD(±)	SE(±)	‘t’	P
		B.T.	A.T.					
Chief complaint	<i>Karna Nada</i> (n=15)	2.13	0.73	65.63	0.63	0.16	8.57	<0.001
Associated complaint	<i>Badhirya</i> (n=12)	2.33	1.5	35.71	0.58	0.17	5	<0.001

In group A, maximum relief was observed in *Karna Nada*- Tinnitus i.e. 65.63% and 35.71% relief was observed in the associated symptom *Badhirya*- Deafness (Table-2).

Table – 3: Effect on chief complaint (*Karna Nada*) & associated complaint (*Badhirya*) in group-B.

Symptoms		Mean Score		%	SD(±)	SE(±)	‘t’	P
		B.T.	A.T.					
Chief complaint	<i>Karna Nada</i> (n=15)	2.07	1.07	48.39	0.54	0.14	7.25	<0.001
Associated complaint	<i>Badhirya</i> (n=10)	1.70	0.48	17.65	0.48	0.15	1.96	>0.05

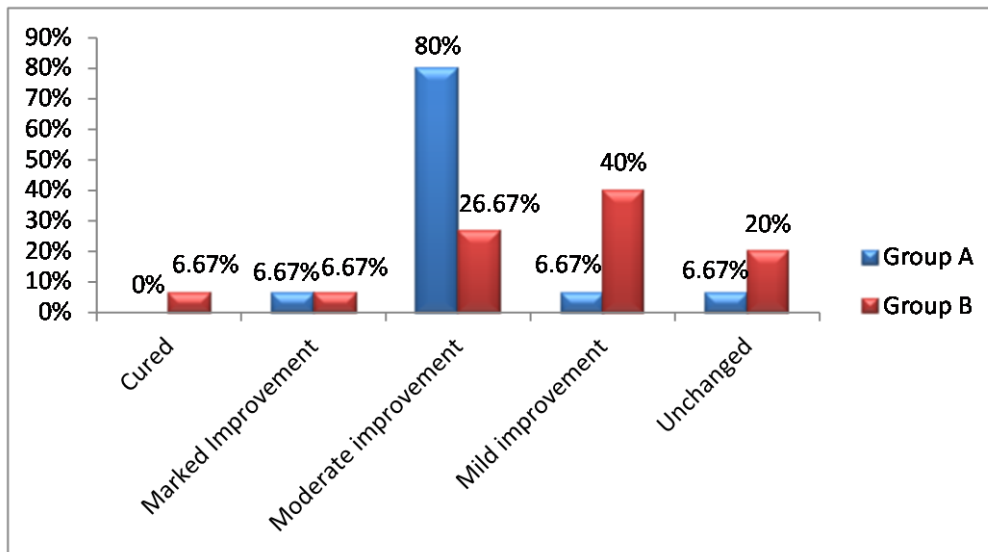
In group B, maximum relief was observed in *Karnanada*- Tinnitus i.e.

48.39% and 17.65% relief was observed in the associated symptom *Badhirya*-

Overall Effect Of Therapy:

Table confirms that in this study, 6.67% patients were cured in group-B. Marked improvement was found in 6.67% of the patients in both the groups. Moderate improvement was observed in 80% in

group-A and 26.67% in group-B. Mild improvement was observed in 6.67% in group-A and 40% in group-B. 6.67% patients remained unchanged in group-A and 20% in group B. **(figure-1)**



DISCUSSION

In *Ayurvedic* literature *Karna Nada* and *Karna Kshweda* are mentioned as diseases as well as symptoms of many diseases viz, *Vataja Shiroroga*, *Krimija Shiroroga*, *Vataja Adhimantha*, *Pandu*, *Grahani*,. In modern science tinnitus is not a disease itself; it is a symptom of many underlying conditions. *Karna Nada*, *Karna Kshweda* and tinnitus in modern medical literature are similar conditions. Being a very distressing invisible condition *Ayurveda* has quoted it as a separate disease. Modern science till date does not give promising results for tinnitus hence it only highlights

as to reduce the ill effects of tinnitus rather than getting rid of it whereas, *Ayurveda* propounds this disease as curable. So the present clinical study has been taken to found the safe solution or management.

The maximum i.e. 29.03% patients belonged to 41-50 years followed by 22.58% in 51-60 years and 19.35% in 61-70 years. 62 percent of patients > 40 years present with tinnitus.¹⁴ This age group is a *Vata* dominant phase of life, degenerative changes begin and progress at this stage. *Karna Nada* is a *Vata* dominant disease

presenting at this age makes it difficult to be treated. Maximum i.e. 74.42% patients were male. Population statistics suggest that females are more affected than males: 46.9 percent males and 53.1 percent females⁻¹⁵ Maximum patients i.e. 38.71 % of the patients got disturbed sleep while 35.48% had delayed sleep, this may be because of greater attention was paid to tinnitus at night time, when surrounding is quiet. Maximum (51.61%) patients were from the quiet background whereas 45.16% were belonging to noisy atmosphere, Due to the effect of natural masking produced by environmental sound, tinnitus is felt less in the noisy atmosphere. So, greater attention can be paid, when surrounding is quiet. Maximum patients i.e.70.97% were having tension. Tension acts as triggering factors. This may lead to *Dhatu Kshaya* and vitiation of *Vata Dosha* thus causing tinnitus.

PROBABLE MODE OF ACTION OF THE TRIAL DRUG

Bilva Taila Karna Poorana: *Bilva* is *Kaphavataghna*, *Shothahara*, *Vedanasthapana* and having nutritive action and *Tila Taila* has *Balya* and *Vatashamaka* properties. *Bilva* protects against genotoxicity which may be due to inhibition of free radicals and increased antioxidant status. *Bilva* improves microcirculation of any sense organ. It is hypothesized that *Bilva Taila* helps in the absorption through epithelial tissue of

external ear canal and tympanic membrane that can maintain normal function of hearing and equilibrium. Spreading of the drug in to the deeper tissues through (*Rasa & Rakta*) *Shabdavaha Sira*. According to '*Kedarakulya Nyaya*', *Karna Poorana* may improve the blood supply of ear first. As the result of *Karna Poorana*, *Kapha* and *Vatashamana* takes place which may correct the microcirculation, thus maintaining the normal function of hearing and relieving sounds in the ear (*Karna Nada*).

***Ashwagandhadya Ghritapana*:**

Ashwagandha has *Rasayana*, *Balya* and *Brumhana* properties thus it can prevent age related degenerative changes in the inner ear. It is used as an adaptogen, a substance said to increase the ability to withstand the stress of all types. Like other adaptogens *Ashwagandha* is supposed to improve the strength of a particular organ (cochlea and the hearing capacity), overall health, strengthen the immunity and normalize the cholesterol levels. All these properties help in improving the blood supply of the inner ear and reduce the acuity of the tinnitus felt by the patient. Habituation and retraining therapy is a new concept put forward by the modern physicians in treating tinnitus. It says that if the patient gets habituated to the noise in the ear he will not feel the stress produced by tinnitus. *Ashwagandha* has anti anxiety action and produces sound sleep which is

very essential to a person suffering from tinnitus. Anxiety caused due to tinnitus, increases the tinnitus and worsens the condition. *Ashwagandha* plays an important role here and helps to reduce the tinnitus. It has been proved that noise exposure is one of the commonest cause for tinnitus and it is called as early degenerative tinnitus. *Ashwagandha* has promising results in reducing the stress caused by noise and also improves the hearing capacity of the individual. Stress is not a direct cause of tinnitus but it will generally make an already existing case worse. *Ashwagandha* is known for its antistress activity. The serotonin content of *Ashwagandha* helps in reducing the stress and pain caused by tinnitus which is a major relief for the patient. According to *Acharya Charaka*, *Ghrita* is effective in subsiding *Pittaja* and *Vataja* disorders, it improves *Dhatu*s and is overall booster for improving *Ojas*¹⁶. *Ghrita* having *Balya*, *Brimhana*, *Rasayana* and *Medhya* effect can be explained by two ways. Digestion, absorption and delivery to the target organ are 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 and E content. Oral administration of *Ashwagandha Ghrita* acts on the nervous system. It enhances the normal hearing. The protective effect of *Ashwagandha* is conceived to be at both the levels:

1) At Hair Cell, 2) At CNS (Cochlear nerve)

On CNS it can be through its GABAergic modulation (an important neurotransmitter) as well as its role to increase in acetylcholine receptor activity and stimulating the growth of axons and dendrites of nerve cells.¹⁷ On hair cell level it may affect by its active constituents like withaferin A and sitoindosides VII –X which are reported to have an anti-oxidant activity by reducing lipid peroxidation.¹⁸ This suggests that *Ashwagandhadya Ghrita* helps in lowering down the degenerative changes occurring at cellular level and empowering the function of sensory organs (may enhance the normal hearing). Moreover, *Ghrita* due to its *Sansakaranuvartana* quality easily imbibes the properties of other drugs processed with it without leaving its own properties. *Acharya Charaka* in *Sutrasthana Snehadhyaya* explained that, “*Snehoanilam Hanti*” which means that *Snehana* is the supreme treatment for *Vata Dosh*a. The vitiation of *Vata* is the major factor in the development of the disease. In the management of *Karnanada*, *Vatashamaka* and *Srotoshodhaka Dravyas* are generally advised.

Bilva Taila and *Ashwagandhadya Ghrita* both have *Vatashamaka* and *Rasayana* properties. Thus both these

drugs pacify *Vata Dosha* which is mainly responsible for the disease *Karna Nada*. *Bilva Taila Karna Poorana* with oral administration of *Ashwagandhadya Ghrita* enhances the nutritional values in the body and also improves blood circulation of the internal ear. Thus, the overall effect of the compound drug is *Vatashamaka*.

- Thus, both the trial drugs can relieve *Karna Nada* and *Kshweda* and prevent degenerative changes occurring at cellular level. By this we may be able to prevent *Badhirya* also which is a complication of *Karna Nada*.

CONCLUSION

1) Tinnitus is a more common disorder worldwide, affecting any age group of both sexes but more often in older age with sensory-neural deafness. Tinnitus, in modern medical literature is a similar condition of *Karna Nada* and *Kshweda*. *Karna Poorana* is an effective local treatment -procedure in *Karnagata Roga*.

2) *Bilva Taila Karna Poorana* in combination with *Ashwagandhadya Ghrita* and plain *Go- Ghrita*, both shows highly significant results on the *Karna Nada*. It can be concluded that *Bilva Taila Karna Poorana* with *Ashwagandhadya Ghrita* is more effective than *Bilva Taila Karna Poorana* with plain *Go Ghrita*.

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