

REVIEW ARTICLE

Conceptual Study of Tinnitus (*Karna Nada*)-An Ayurveda View

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ARTICLE INFO

Article history:

Received on: 03-09-2023

Accepted on: 20-10-2023

Available online: 31-10-2023

Key words:

Ayurveda,
Karna Nada,
Nada,
Tinnitus,
Treatment

ABSTRACT

Background: One of the irritating conditions that can drastically lower a patient's quality of life and productivity is tinnitus. Even though it is not a life-threatening condition, emotional discomfort, cognitive difficulty, intrusiveness, auditory and perceptual issues, sleep disturbances, and a variety of somatic ailments are the consequences. Its frequency and prevalence are increasing daily. Anticonvulsants, anxiolytics, antidepressants, muscle relaxants, and other pharmacological drugs are now used or being tested for their pacification, but there is little proof that their benefits outweigh their risks. Also poorly understood is the function of neurostimulation therapies, both invasive and non-invasive. Cochlear implantation and the development of hearing aids have not shown, particularly clear results.

Materials and Methods: Tinnitus and *Karnanada*-related information were gathered from texts on Ayurveda, commentaries, and contemporary medicine, respectively.

Results: As a result, there is a need to make treatments that are widely recognized, widely successful, and capable of withstanding systematic replication available. These treatments should be able to significantly reduce the volume and impact of tinnitus.

Discussion: Tinnitus has numerous etiologies and unexplained causes, which makes it difficult to determine a specific treatment plan today. As a result, the prognosis for the condition is also unknown. However, the prognosis and course of treatment for *Karnanada* are described in Ayurveda, and we can get better and more satisfied results.

Conclusion: Ayurvedic medicine is the most effective treatment for reconstructive ear surgery, and it is best to combine it with herbal remedies.

1. INTRODUCTION

According to Ayurveda, *Karma*, *Kala*, and *Artha* (*Indriya*) are the *Atiyoga*, *Heenayoga*, and *Mithyayoga* that are responsible for the establishment of any ailment.^[1] Similar to *Atiyoga Heenayoga* and *Mithyayoga* of *Shabda*, these individuals may have been the catalysts for the creation of *Karnanada*. *Karnanada* patients may experience a variety of sounds in their ears, including unilateral, bilateral, steady, and transitory sounds. The pitch, sound quality, and volume of this sound can change. It could make noises such as rustling, hissing, roaring, clicking, or swishing. It is more annoying in a quiet setting and at night when ambient noise from the surroundings has less of a masking effect. It is a symptom, not a disease, and its root causes may lie in the 8th nerve, the brain, or the middle or inner ear. Tinnitus may also be brought on by certain systemic conditions, including anemia, hypotension, or

hypertension, as well as by medicines that have an impact on the inner ear or auditory pathway. Tinnitus can also be brought on by prolonged exposure to loud noise, which may be the cause of the rise in cases among young people.^[2] Tinnitus can be brought on by prolonged use of electronic devices such as headphones, earphones, and mobile phones, which emit electromagnetic waves and high levels of electromagnetic fields that can harm the ear as well as other body parts. Typically, it is categorized as either subjective or objective. Objective tinnitus is a type of ringing in the ears that is generally pulsatile in character and is caused by para-auditory structures. Only the patient can hear sound when they have subjective tinnitus. The vast majority of people who experience subjective tinnitus do so, and whenever the term "tinnitus" is used, it usually refers to this type of tinnitus, which is only audible to the person experiencing it.^[3] The term "genuine tinnitus" could be used to describe tinnitus rather than the categories of "subjective" or "objective" tinnitus. Objective tinnitus, also known as somatic tinnitus, is a sound sensation that is produced by an acoustical source inside the body and should not be classified as tinnitus but rather as the

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ailment that is generating it.^[4] It is very difficult to identify the precise source of tinnitus, but it is generally accepted that it could result from any physical or psychological alteration that is not primarily related to the ear. Tinnitus is reduced when the underlying cause is identified and addressed; however, there are times when this is not possible. This article discussed tinnitus (*Karnanada*) in general and how Ayurveda manages it through medicines.

2. MATERIALS AND METHODS

Tinnitus and *Karnanada*-related information were gathered from texts on Ayurveda, commentaries, and contemporary medicine, respectively. Index and non-index medical publications have also been used to gather data on relevant topics.

3. CONCEPTUAL STUDY

Tinnitus, or ringing in the ears, is the sensation of hearing ringing, buzzing, hissing, chirping, whistling, or other sounds. The noise can be intermittent or continuous and can vary in loudness. It is often worse when background noise is low, most often at night in a quiet room. In rare cases, the sound beats in sync with the heartbeat (pulsatile tinnitus).^[5]

One of the twenty-eight *Karna rogas* described in Susruta Samhita, Bhavaprakasa, and Yoga Ratnakara is *Karnanada*, which is primarily caused by *Vata Dosha*. Astanga Hrdaya claims that *Karnanada* is a *Sadhya Vyadhi* and can be easily managed.

The term *Karnanada* is basically derived from two root words: *Karna* and *Nada*.

The term “Karna” refers to the exterior, middle, and internal ears, which together make up the group of organs that perceive sound. The words “*Nada*” or “*Ninada*” refer to anything that causes rhythmic noises to be heard.^[6]

According to the National Center for Health Statistics, tinnitus affects 32% of Americans, with 6% reporting severe cases.^[7] Between 8 and 25% of adults worldwide are estimated to have chronic tinnitus, according to large demographic surveys.^[8,9] Tinnitus was shown to have an incidence of 5.7% over a 5-year follow-up period and a prevalence of 8.2% in a population-based investigation of hearing loss in people aged 48–92. As people get older, tinnitus is more common.^[10]

The *Samanya Karnaroga Nidanans* give rise to the vitiation of *Vata Dosha*, including *Avashyaya* (exposure to cold), *Jalakrida* (swimming, diving, or any other activity that allows water to enter the ear canal), *Karnakandu* (improper auditory scratching), *Mithyayoga* of *Shastras* (improper instrumentation), etc. Additionally, this *DushitVata* vitiates other *Doshas*, which then spread to the *Karna* (aural) *Shiras* and result in aural illnesses.^[11] According to our Acharyas, in addition to these causes, any other ailment that can aggravate *Vata Dosha* may result in tinnitus. Examples include little sleep, constant conversation, excessive fasting, excessive activity, unexpected shock, grief, or terror, among other things. In addition to *Karnanada*, Acharya also mentioned a disease called *Karnashweda*, which has its own *Nidanans*, including *Shram* (excessive effort), *Ruksha*, and *Kashaya*.^[12] Tinnitus is a symptom of any underlying condition that may exist inside or outside the ear, sickness or illness in and of itself. Tinnitus may start in the external ear (impacted wax, foreign body, fungus), middle ear, internal ear (Meniere’s disease, otosclerosis), eighth nerve (tumor), presbycusis, noise trauma, or use of ototoxic drugs.^[13] Presbycusis is

a disorder in which the cochlea’s fragile and tiny sensory hair cells become worn out and disappear as people age. Because there is no sound from the outside environment to cover up the tinnitus, this progressive alteration may result in hearing loss. Short-term exposure to extremely loud noises can harm stereocilia in cases of noise trauma, which may cause tinnitus, hearing loss, or both. Ototoxic substances have comparable effects. Causes that are non-otologic, or those that are not related to the ear, include CNS disorders, anemia, hyper- or hypotension, hypoglycemia, etc.^[2,14]

3.1. Symptoms

Due to a vitiated *Vata Dosha*, a person can hear several sorts of sound in *Karnanada* even when there is no relevant sound present. The Acharyas claim that this sound generally resembles the sound made by the *bheri mrunagshankha*, a musical instrument used in *Samhita Kaal*, and that it appears after *Vata Prakopak Nidanans*. Our Acharyas have also described a condition called *Karnashweda*, which is almost identical to *Karnanada* and causes patients to hear a flute-like sound called *Venughoshopamam*.^[15] Tinnitus is an auditory phenomenon that causes noise to be perceived in the head or ears. One or both ears may be affected, and the condition may be intermittent or ongoing. It could be a hissing, roaring, swishing, or clicking type of sound, and it can vary in pitch (high or low), loudness (high or low), and nature. Because there is no longer a masking effect from background noise, it is more unpleasant in quiet environments.^[2]

4. TREATMENT THROUGH AYURVEDA

Tinnitus instances are rising daily, especially among young people, so we need to develop an effective cure. According to our ancient texts, *Vata Dosha* is typically the cause of the majority of aural diseases, and *Karnanada* is one of them. Therefore, *Vata Shamaka* treatments such as *Ghruta Paana* and *Rasayana Sewan* ought to be helpful.^[16] The same line of treatment is usually used to treat the four diseases known as *Karnashula*, *Karnanada*, *Karnabadhira*, and *Karnasweda*.^[17] As *Vata dosha* is mainly vitiated, tinnitus can be treated with therapies and medicines that balance *Vata* (*Snehan*, *Swedana*, *Nasya*, *Karnapoorana*, *Shiro*, and *Pada Abhyanga*). *Swedana* (hot fomentation) should be administered after *Snehan* around the ear and face with *Bala Tail*, *Narayan Tail*, and *Dashmoola Tail*. *Karnapoorana* is administered with *Sharshapa Tail* and *Gruhadhumadil Tail*. If the predominant aspect is *Kapha*, *Karnapoorana* can be performed after *Vamana*. *BalaTail* can be administered before *Karnapoorana* as *Nasya*. The *PranaVayu* is specifically calmed by *Abhyanga*, *Shiroabhyanga* (head massage), and *Padabhyanga* (foot massage with lukewarm *BalaTail*, *KshirabalaTail*, and *Sesame Tail*). Warm oil should be massaged into the scalp and soles of the feet before going to bed. The *Prana Vayu* quickly returns to normal after this therapy. A few drops of heated oil are administered daily to each ear as *karna poorana* (ear drops) to soothe the *vata* in the ears. The oil is allowed to remain in the ear for ten minutes, then that ear is cleaned, and the same procedure is followed with the other ear, with the patient lying on the other side. Tinnitus and the majority of other *pranaVayu* disruption symptoms should typically disappear within eight to ten days of treatment. *Karnapoorana* may be performed using *BihwadiTail*, *ApamargaksharTail*, *DashmoolTail*, *NarayanTail*, *VishnuTail*, *DipikaTail*, *HingwadiTail*, and *NirgundiTail*. In addition, *Kawala* and *Gandusha* may help to calm down agitated *Vata* and strengthen the nerves. According to Acharya Chakradutta, medications used for *Vataja Shula* also benefit the treatment of *Karnanada* and *Karnabadhira*.^[17]

5. DISCUSSION

The Latin word “tinnier” (which means “ringing”) is the root of the term “tinnitus,” which signifies ringing. It is a condition where the patient hears aberrant sounds without any outside sources. It is typically connected to hearing loss and dizziness. When there is no background noise to mask, it is more distressing. It is a condition rather than a sickness, and its causes may be in the body as a whole. Finding the primary source of the condition and treating it is therefore the best way to treat tinnitus. Sometimes the patient must learn to live with the condition after we are unable to identify the reason, but for some people, this continuous sound causes them to commit suicide. 40 million people are affected in the United States; 75% are not bothered by it, but 10 million are severely affected. It is most common in 40–70-year-olds, with roughly equal prevalence in men and women. It includes buzzing, hissing, roaring, clicking, and pulsatile nature sounds in one or both ears. It is more disturbing in quiet surroundings, as it can't be masked by other noises. It is a condition rather than a disease itself, and its causes may lie inside the ear (wax, foreign body, asom, otosclerosis) or in the rest of the body (blood sugar level and blood pressure variation). Tinnitus is known as *Karnanada* in Ayurveda and is a sign of a Prana Vayu imbalance rather than a sickness. A *subdosha* of *Vata* called *Prana Vayu* brain and controls the higher cerebral functions. According to our classics, in *Karnanada*, *Vata* travels along the *Shabadvaha* srotas and is the reason for the production of loud sounds. *Vatashamaka* treatment, which is similar to *karnashula* and *karnabadhira* treatment, can be used to treat this condition. In addition to *Medhya*, *Sedative*, or *Balya Chikitsa*, we can also administer the patient *Ghrutapana*, *Rasayana*, *Naadisweda*, *Karnapoorana*, *Shiro*, and *Pada Abhyang*. *Karnanada* must be managed carefully because it may cause hearing loss, concentration issues, sleep disturbances, depression, and other problems. Sometimes making modifications to one's way of life, such as refraining from using headphones or mobile devices excessively or sleeping too little, might be advantageous.

6. CONCLUSION

Tinnitus, a widespread problem, can be compared to *Karnanada*, which is recorded in Ayurvedic texts. Its multifactorial etiology includes age, noise exposure, ototoxic medications, vascular issues, metabolic diseases, temporo-mandibular joint dysfunction, and as a result of other disorders. It may start in the ears or in the area around the head. It exhibits the symptom of hearing sounds that are buzzing, hissing, roaring, clicking, or have pulsatile characteristics when there are no external stimuli present. Both unilateral and bilateral perceptions are possible. *Rasayana*, *Medhya Aushadha*, *Karnapoorana*, and other *Kriyakalpas* are examples of effective treatments for this disease, according to Ayurveda. This condition is said to have manifested due to the vitiation of *Vata Dosha*. Drugs from Ayurveda lower the possibility of negative side effects. Thus, we can draw the conclusion that Ayurvedic treatment for *Karnanada* (tinnitus) treats the problem systematically and relieves the underlying cause of the *Dosha*, while modern scientific treatment for *Karnanada* (tinnitus) has very little success.

7. ACKNOWLEDGMENTS

Nil.

8. AUTHORS' CONTRIBUTIONS

All the authors contributed equally in design and execution of the article.

9. FUNDING

Nil.

10. ETHICAL APPROVALS

This study not required ethical clearance as it is review study.

11. CONFLICTS OF INTEREST

Nil.

12. DATA AVAILABILITY

This is an original manuscript, and all data are available for only review purposes from the principal investigators.

13. PUBLISHERS NOTE

This journal remains neutral with regard to jurisdictional claims in published institutional affiliations.

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How to cite this article:

Sharma YK, Fyaz S. Conceptual Study of Tinnitus (*Karna Nada*)-An Ayurveda View. IRJAY. [online] 2023;6(10):90-93.

Available from: <https://irjay.com>

DOI link- <https://doi.org/10.47223/IRJAY.2023.61014>