

A SINGLE CASE STUDY ON EFFECT OF LAKSHADI CHOORNA KARNADOOPANA IN OTOMYCOSIS ASSOCIATED WITH OTITIS MEDIA

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ABSTRACT

Otomycosis is a common condition encountered in a general otolaryngology clinic setting and has typically been described as fungal infection of the external auditory canal with frequent complications involving the middle ear. Although rarely life threatening, the disease is a challenging and frustrating entity for both patients and otolaryngologists as it frequently requires long-term treatment and follow-up. Despite this, there could be recurrences. *Karnasrava* is a disease mentioned by Acharya Sushruta in the chapter of *Karnaroga* Vigyaniya under twenty-eight *Karnarogas*. *Karnasrava* is the condition characterized by discharge from *Karna* and occurs mainly due to *Avarana* of *Vata Dosh*. Otomycosis being one of the causes of *Karnasrava* was selected for the study. Treatment of *Karnasrava* is explained by Sushruta i.e. *Karnadoopana*, *Karnapoorana*, *Prakshaalana* etc.

Case Study: This is a case report of 50-year-old female patient who had complains of pain in right ear since 1 month associated with watery discharge from right ear. The subject is a known case of diabetic mellitus since 1year. The Otosopic examination of bilateral ear, confirmed that, diagnosis of right ear was Otomycosis associated with otitis media.

Materials and Method: The subject who approached *Shalakyā tantra* OPD of GAMC with symptoms of right ear pain associated with on and off watery discharge was systematically reviewed. Intervention was planned for *Doshic* component involved in *Karnasrava*.

Result: The subject showed considerable improvement in right ear.

Discussion: *Karnasrava* is the condition characterized by *Srava* from *Karna* and occurs mainly due to *Avarana* of *Vata Doshā*. Otomycosis is a fungal infection of external auditory canal and one of the causes for *Karnasrava*. This study sheds light on holistic treatment like *Karnadoopana* told in the *Ayurvedic classics*.

Keywords: Otomycosis, Otitis media, *Karnasrava*, *Karnadoopana*, External auditory canal.

INTRODUCTION

Otomycosis or fungal otitis externa has typically been described as fungal infection of the external auditory canal with frequent complications involving the middle ear. Although rarely life threatening, the disease is a challenging and frustrating entity for both patients and otolaryngologists as it frequently requires long-term treatment and follow-up. Despite this, there could be recurrences.

Otomycosis is one of the common conditions encountered in a general otolaryngology clinic setting and its prevalence has been quoted to range from 9%⁽¹⁾ to 27.2%^(2,3) among patients who present with signs and symptoms of otitis externa and up to 30%⁽⁴⁾ in patients with discharging ears. It is worldwide in distribution with a higher prevalence in the hot, humid, and dusty areas of the tropics and subtropics⁽⁶⁾. Overview of the literature reveals Otomycosis to be a common medical problem in India⁽⁷⁾.

Fungi can either be the primary pathogen or be superimposed on bacterial infections. Most patients suffering from early Otomycosis complain of severe itching which often progress to pain, hearing loss, and often leading to tympanic membrane perforations⁽⁸⁾.

Although *Aspergillus Niger* and *Candida albicans* are by far the most common offenders⁽⁹⁾, a wide spectrum of other fungi can cause Otomycosis. Various factors have been proposed as predisposing factors for Otomycosis, including a humid climate, presence of cerumen, instrumentation of the ear, immunocompromised host, and, more recently, increased use of topical antibiotic/steroid preparations.

Diagnosis is mostly clinical, and *Aspergillus* and *Candida* species are the most

commonly identified fungal pathogens.⁽¹⁰⁾ Fungal pathogens have been reported to cause 9% of all cases of otitis externa, but this figure appears to be on the rise, presumably because of the increased use of topical antibiotics.⁽¹¹⁾

An infrequently reported complication of Otomycosis is tympanic membrane perforation.⁽¹²⁾ *Karnasrava* is a disease mentioned by *Acharya Sushruta* in the chapter of *Karnaroga Vigyaniya* under twenty-eight *Karnarogas*.⁽¹³⁾ *Acharya Charaka* included *Karnasrava* as a symptom under the four types of *Karnarogas* due to vitiation of different *Dosha*.⁽¹⁴⁾

Karnasrava is one of symptom of Otomycosis. In *Vrana srava Vigyaniya Adhyaya*, *Acharya Sushruta* has described many types of *Srava*. Out of them *Twakagata* and *Mamsagata Srava* is in similar with modern Otomycosis.⁽¹⁵⁾ The general line of treatment of *Karnasrava* is *Shirovirechana*, *Dhoopana*, *Karnapoorana*, *Pramaarjana*, *Dhaavana*, *Prakshaalana* etc.⁽¹⁶⁾

In Otomycosis, frequent cleaning of external auditory canal either by suction, evacuation or by syringing, followed by mopping are advised which are very similar to Ayurvedic line of treatment of *Karnasrava*. Further topical medications are applied as disinfectant, anti-inflammatory and antifungal¹⁷.

In modern times, many treatments are there, but it is having side effects like burning sensation, stinging sensation etc. The treatment of this particular disease has never been satisfactory and therefore, a number of treatments were advised to relieve this condition. So, to overcome above problems there is a need to find

cheaper and easily available Ayurvedic medicine. In the present study Karnadoopana with Lakshadi choorna and internally Chitrakadi harithaki lehya, Lakshadi guggulu and Sarivadi Vati were selected.

A CASE STUDY

Date of Visit-7/7/2019

Chief Complaints- pain in right ear and watery discharge on and off since 1month.

History of present illness: Patient was apparently normal before 1month back, later she developed pain in right ear with discharge on and off. Then she consulted to our hospital on 7/7/2019. *Ayurvedic* management was carried out after detailed assessment of her bilateral ear examination and history.

Past History - Nothing significant.

Table 1: On examination (before treatment)

	Right ear	Left ear
Pinna	Normal	Normal
Preauricular area	Normal	Normal
Post auricular area	Normal	Normal
External auditory canal	Otomycosis	Normal
Tympanic membrane	Central perforation	Normal
Mastoid	Non tenderness	Non tenderness
Nose examination	Normal	Normal
Paranasal sinus	Normal	Normal

Oropharynx –normal

Oral cavity –normal

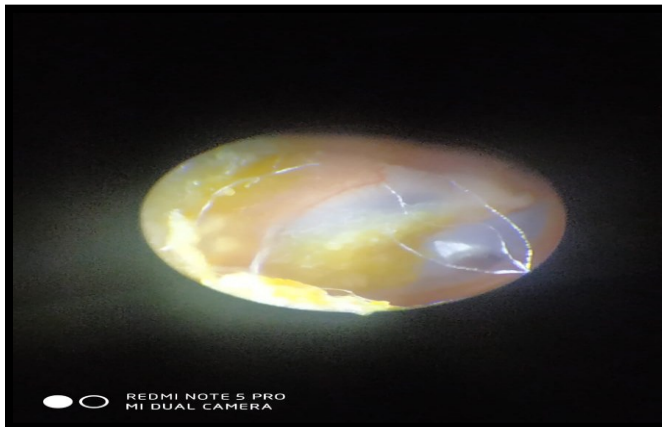
Treatment given

Yoga is *Anubhutha yoga*, there is no direct reference of *Lakshadi choorna Karnadoopana* but *Lakshadi*

choorna contains drugs are antibacterial, antimicrobial and Anti-inflammatory.

1st sitting (7/7/2019 to 13/7/2019)	1. Cleaning of fungal growth with help of jobson probe. 2. <i>Karnadoopana</i> with <i>Lakshadi choorna</i> (<i>Laksha, Nimba, Guggulu, Haridra</i>). 3. Tab. <i>Sarivadi Vati</i> -(1-1-1) After food. 4. Tab. <i>Lakshadiguggulu</i> (1-1-1) After food 5. <i>Chitrakadi harithaki lehya</i> (1tsp-0-1tsp) After food	7days 7 days 7 days 7days 15days
2nd sitting (7/8/2019 to 13/8/2019)	1. <i>Karnadoopana</i> with <i>Lakshadi choorna</i> . 2. <i>Lakshadi guggulu</i> (1-1-1) After food 3. Tab. <i>Sarivadi Vati</i> -(1-1-1) After food. 4. <i>Chitrakadi harithaki lehya</i> (1tsp-0-1tsp) After food	7 days 7 days 7days 15days
3rd sitting (7/9/2019 to 13/9/2019)	1. <i>Karnadoopana</i> with <i>Lakshadi choorna</i> 2. <i>Lakshadi guggulu</i> (1-1-1) After food 3. Tab. <i>Sarivadi Vati</i> -(1-1-1) After food. 4. <i>Chitrakadi harithaki lehya</i> (1tsp-0-1tsp) After food	7 days 7days 7days 15days

Figure 1: After treatment (viewed through end-scope)



1. Otomycosis 90% cured.
2. Central perforation 80% healed.
3. Complete pain reduction.

DISCUSSION

In Otomycosis, mainly watery and purulent type of discharge is present which shows the condition of *Paka*. While removing the fungal mass, ulceration of external auditory canal is likely to happen. Considering these points Otomycosis can also be treated in the line of *Dushtavrana*.

Regarding *Sadhyasadhyata*, *Acharya Sushruta* has mentioned that *Vrana* situated in *Twaka* and *Mamsa* and *Vrana* lying in *Karna* is *Sukha Sadhya*.⁽¹⁸⁾ In *Uttaratantra*, *Acharya Sushruta* considered *Karnasrava* itself as *Sadhyaroga*.

Probable mode of action of drug used for Karnadoopana

Karnadoopana is a procedure, introducing medicated *Dhooma* (smoke) into the ears. It helps to dry up the secretions in external auditory canal and inhibit the growth of microorganisms.

Lakshadi Choorna contains **Laksha, Guggulu, Haridra and Nimba choorna. (Anubhutha yoga)**

1. *Laksha*- has *Kashaya, Tikta* and *Madhura Rasa* which is called as *Saumya Rasa*. It pacifies *Pitta*. It is mentioned for *Vranaropaka* in *Bhela samhita*.⁽¹⁹⁾ It is a *Vednashamana, Daha Prashamana, Shothahara* and *Krimihara* dra-

vya.⁽²⁰⁾ *Laksha Choorna* is astringent, having analgesic and anti-inflammatory property.

2. *Guggulu* -helps in relieving *Shotha* and does *Lekhana Karma*. *Guggulu* and *Laksha* are known to be having analgesic and anti-inflammatory properties.
3. *Haridra* -is having ***katu*** and ***Tikta*** *rasa* and *ushna virya*. It is having *rooksha guna*. It is helpful in wound healing. *Charaka* says – *Haridra is lekhaneeya, kushthaghna and vishaghna*.
4. *Nimba patra choorna*- has good antibacterial effect. *Nimba* is well known and described

As *Kandughna, Kushthaghna* and *Krimighna*. *Nimba* is *Vayu* and *Akasha mahabhoota Pradhana*. That is why its *patra Dhooma* may act on pyogenic bacteria *staphylococcus aureus*. This *Nimbapatra Dhooma* stops the multiplication of bacterial cell and dries up the intracellular fluid matrix in a bacterial cell by its *panchabhautik* properties i.e. *rooksha, laghu, vishada* and *lekhana guna*. This mechanism produces disturbance in bacterial cell's metabolism and hence resulting in bactericidal action of the *dravya*.

1. *Nimbapatra Dhooma* acts by inhibiting the growth of bacteria by killing them.
2. *Sarivadi Vati*- It is one of the medicines of *Karnarogas* explained by *Baishajyaratnavali In Karnaroga Adhyaya*.
3. *Chitrakadi Harithaki Lehya*-It is one of the *Amapachana* drug and having properties like mucolytic, antibacterial, anti-inflammatory, antimicrobial, antioxidant and immune modulator. So here I had taken the medicine because it helps in removing of abnormal secretions from *Srothas* like *Karnavaha Srothas*
4. ***Lakshadi Guggulu***- It is one of the best *Asthisandana* drug and *Shoolahara* drug. It helps to heal tympanic membrane perforation.

CONCLUSION

Karnasrava (Otomycosis) is a disease which may lead to severe complications. *Ayurvedic* line of treatment gives useful result in the management of *Karnasrava* by improving general status. The mode of treatment was found to be cost effective, safe and easy to imple-

ment. *Lakshadi Karnadoopana* for duration of 7 days and 3 sittings is sufficient for the treatment of the disease *Karnasrava* (Otomycosis), provided with proper *Pathyāpathya*. If *Vrana* associated with *Karnasrava*, *Dushtavrana Chikitsa* can also be adopted in the management of *Karnasrava*.

In the management of the Otomycosis, *Lakshadi Karnadoopana* has shown better results. The duration of the treatment is short; hence, for reaching any definite conclusion, further long-duration studies are needed. Since the study has shown interesting results, it is recommended that the study can be carried out on a large number of patients with longer duration to evaluate and analyze the results.

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