



EFFECT OF GOMUTRA PRAKSHALANA AND GOMAYADHI DHOOPANA IN THE MANAGEMENT OF OTOMYCOSIS – A CASE STUDY

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ABSTRACT

Otomycosis is a fungal infection of an ear canal. Clinical features of Otomycosis include intense itching, discomfort, ear pain, discharge with a musty odor, ear blockage due to fungal mass and meatal skin becoming sodden, red and edematous. A fungal mass may appear white, brown or black. Treatment includes aural toileting, antifungal agent and Antibiotic/steroids in cases of associated bacterial infection. Based on signs and symptoms, Otomycosis can be correlated with Karnakandu. Karnakandu is one among the karnaroga caused by an accumulation of kapha alone or along with vata in karna srotas which leads to itching and swelling in EAC. Treatment includes vamana, nadisweda, dhooma, Nasya and kaphahara chikitsa. A 35-year-old female patient visited to our OPD was diagnosed with Otomycosis. She was treated with karna pramarjana followed by Karnaprakshalana with Gomutra and karna Dhoopana with Gomayadhi dhoopa twice a day for 5 days. The patient got relief from signs and symptoms in 5 days. After treatment follow-up was done for 1 week there was no reoccurrence. due to the Karma and antifungal properties of drugs that are used in karnaprakshalana and karnadhoopana shown complete recovery from disease without reoccurrence.

KEYWORDS: Otomycosis, Karnakandu, Karnaprakshalana, Karnadhoopana, Gomutra, Gomayadhi Dhoopa.

INTRODUCTION

Otomycosis is a type of otitis externa that occurs in the ear canal due to fungal infection. The most common fungi are *Aspergillus niger*, *Candida albicans*, and *A.fumigatus*.^[1] Otomycosis is the most common disease that we have seen in ENT OPD. The prevalence rate of otomycosis all over the world is 5.2% and in India 9%. Further 5-25% among otitis externa.^[2] Which is commonly seen in hot and humid climates of tropical and subtropical countries. Predisposing factors are patients using topical antibiotics for treatment of otitis externa or middle ear suppuration, swimming, scratching EAC with contaminated sticks, diabetes, and other immunocompromised states. The clinical features of otomycosis include intense itching, pain, watery discharge with a musty odor, and ear blockage. On examination *A. niger* appears as black-headed filamentous growth, *A. fumigatus* as pale blue or green, and *Candida* as a white or creamy deposit. Sometimes Metal skin appears sodden, red, and oedematous.^[3] Superficial fungal infection is the most common and limited to EAC. The invasive type is rare and involves temporal bone.^[4] Treatment includes a thorough ear toilet to remove all discharge and epithelial debris which are

conducive to the growth of fungus. It can be done by syringing, suction, or mopping, and antifungal treatment like Nystatine, clotrimazole, Povidine Iodine and 2% salicylic acid. Bacterial infections are often associated with otomycosis and treatment with an antibiotic/ steroid preparation helps to reduce inflammation and edema and thus permitting better penetration of antifungal agents.^[5] Karnakandu is one among karnaroga. It is characterized by kandu and shopha in the EAC.^[6] Due to nidana sevana of avashyaya, jalakreeda, karnakandu, mithayoga of shastra.^[7] the kapha dosha^[8] alone or along with vata gets accumulated in srotas of karna results karnakandu. In karnakandu kandu is the main complaint, and in otomycosis also itching is the main complaint based on signs and symptoms karnakandu can be correlated with otomycosis. Samanya chikitsa of karnakandu includes vamana, nadisweda, dhooma, nasya, and kaphahara chikitsa.^[9]

In this case, karnaprakshalana with Gomutra and karnadhoopana with Gomayadhi dhoopa was done. Drugs that are used for karnaprakshalana and dhoopana are Gomaya, Gomutra, Goghrita and Haridra have antifungal, srotoshodhaka and kaphaghna properties.

CASE REPORT

A 35-year-old female patient working as a sweeper visited our OPD with chief complaints of severe itching and pain in the left ear since the week. the patient had no medical history and no associated complaints. No history of any immune-compromised diseases.

On examination Sharirika Prakriti of the patient was kapha-pittaja. Nadi(pulse) was kapha-pitta. Mutra(urine) and Mala(feces) were normal. Jihva(tongue) was non-

coated. Sparsha(touch) was warm. and she was moderately built.

Pulse was 78/min, blood pressure was 120/70mmhg, and respiratory rate was 20/min, abdomen was soft and nontender.

On local examination with otoendoscope (described in table no. 1) the black-headed fungal mass was seen in the left external auditory canal.

Table No.1

	Right	Left
Preauricular	Normal	Normal
Postauricular	Normal	Normal
Pinna	Normal	Normal
EAC	Normal	Fungal mass (Black-headed mold)present
TM	Intact	Intact (after cleaning)

Treatment

The patient was treated with local treatment from 5/07/2023 to 9/07/2023 as mentioned in Table.2, and follow-up was done for 1 week.

Table 2: Treatment protocol.

S.No	Procedure	Medication	Timings	Total duration of treatment
1	Karna pramarjana (dry mopping)	-	Twice a day	5 days
2	Karna Prakshalana	Gomutra	Twice a day	5 days
3	Karna dhoopana	Gomayadhi dhoopa	Twice a day	5days

Gomutra prakshalana

For karnaprakshalana procedure fresh urine was collected daily from Indian cows in a sterile container and filtered through filter paper to get rid of debris used in warm state.

Gomayadhi dhoopa karnadhoopana

For the preparation of gomayadhi dhoopa, 100g Gomaya(cow dung), 10ml Gomutra (cow urine), 10g

Haridra (curcum longa), 5g Goghrita (Ghee) were mixed properly and made small cylindrical shape dhoopa(Figure 3), dried in sunlight after complete drying used for karnadhoopana.

The Rasapanchaka and antifungal properties of drugs that are used in Gomayadhi dhoopa are as follows (Table.No 3)

Table 3: Properties of drugs.

Dravya	Rasa	Guna	Veerya	Vipaka	Rogagnata	Doshagnata	Antifungal Constituents
Go mutra ^[10]	Katu,Tikta, Kashaya	Teekshna, Kshara	Ushna	Katu	Kanduhara, Krimighna Shoolahara	Kaphavata	phenolic acids(gallic, caffeic, ferulic, o-coumaric, cinnamic and salicylic acid) ^[11]
Go maya ^[12]	Kashaya, Tikta	Shushka	Ushna	Katu		Kapha	
Go ghrita ^[13]	Madhura	Snigdha	Sheeta	Madhura	Rakshoghna	Tridosha	Fatty acids ^[14]
Haridra ^[15]	Katu, Tikta	Rooksha	Ushna	Katu	Krimighna, Vranahara, Shothahara, Twak doshahara	Kaphapitta	Curcumin ^[16]

Pathya-Apathya

Patient was advised to avoid head bath, swimming, putting earbuds in ear and kaphakara ahara.

Table.no 4 and by the end of the treatment all signs and symptoms were reduced, after treatment follow up was done for 1 week, there was no reoccurrence (Figure 4-5).

OBSERVATIONS AND RESULTS

Patient had started responding to the treatment. Observation and results are shown in

Table No. 4: Observations And Result.

Sl.No	Signs & Symptoms	1 st day	3 rd day	5 th day
1	Itching	Severe	Mild	No itching
2	Pain	Mild	Mild	No pain
3	Fungal mass	Full packed EAC	Little	No fungal mass

DISCUSSION

Otomycosis is a fungal infection of the external auditory canal caused by different fungi, based on signs and symptoms otomycosis is correlated with karnakandu. It occurs when vitiated kapha along with vata lodge in karnasrotas. In this case, the otomycosis is caused by aspergillus niger fungi.

Mode of action of Dravya

Gomutra - Gomutra contains antifungal constituents like phenolic acid (gallic, caffeic, ferulic, 0-coumaric, cinnamic) and salicylic acid. Salicylic acid is a keratolytic agent that removes superficial layers of the epidermis, and along with that, the fungal mycelia growing into them.^[17] antifungal qualities of cow urine are examined by agar well diffusion method and found to be effective against *Aspergillus niger*.^[18] kanduhara, krimighna, shoolahara, kaphavatahara action of gomutra will act as srotoshodhana and pacifies doshas.

Gomaya -Patulodin-like compounds CK2108A and CK2801B produced by *Eupenicillium bovisomum* present in cow dung have more antifungal activity.^[19] Kaphahara property of gomayapacifies the dosha.

Haridra - Methanol and aqueous extraction of haridra has antifungal properties^[20] and krimighna, vranahara, shotahara and kaphahara properties of haridra act on karnakandu.

Goghrita – Goghrita helps in rapid combustion. saturated and unsaturated fatty acids of Goghrita have antifungal property and also it helps in the regeneration of the tissue. It pacifies tridosha.

Mode of action of karnaprasakshalana

Karna prakshalana clears the debris lodged in EAC and the drug used for karnaprasakshalana is absorbed through meatal skin (Bhrajaka pitta) pacifies the vitiated doshas (Figure 1).

Mode of action of karnadhoopana

Dhoopana karma comes under Rakshoghna vidhi (sterilization). It dilates blood vessels and helps in the oxidation of blood. It leads to adequate tissue perfusion and oxygenation. Thus, reduces inflammation and itching and eliminates infection.^[21]

Karnadhoopana will do srotoshodhana by clearing obstruction in srotas which is caused by kapha and keeps the EAC dry. So this prevents further growth of fungus (Figure 2).

CONCLUSION

Karnakandu is mainly caused by kapha and along with vata. Samanya chikitsa of karnakandu includes, kaphahara chikitsa, vamana, dhooma, nadisweda and nasya. Otomycosis is caused by fungi. Otomycosis treatment consists of aural toileting and antifungal medications. Thus, based on dosha and samprapti of diseases the drugs have been taken. Karna prakshalana with gomutra removes fungal mass, and also it acts as anti-fungal and srotoshodhaka. Karnadhoopana with Gomayadhi dhoopa will do srotoshodhana and aid in the eradication of fungal microbes, and prevent reoccurrence by keeping EAC dry. So the both gomutra prakshalana and Gomayadhi dhoopa karnadhoopana effective in otomycosis.



Figure 1: Karna prakshalana.



Figure 2: Karna dhoopana.



Figure 3: Gomayadi Dhoopa.

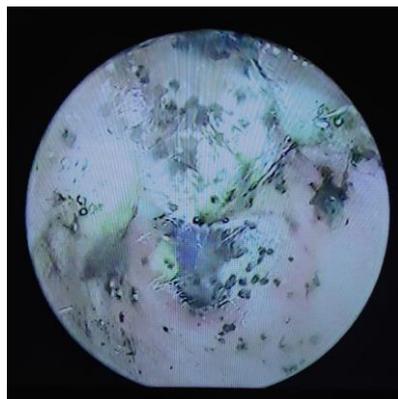


Figure 4: Before treatment.



Figure 5: After treatment.

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