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***Karna Avachoorana* in Otomycosis with special reference to *Karna Kandu*- A Case Report**

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ABSTRACT

Introduction

A case report of 21 year old female who complained of itching associated with pain in left ear, which aggravates during night time. Endoscopic examination of the left ear revealed Otomycosis due to *Candida albicans*.

Materials and Methods

The subject who approached Shalakya Tantra OPD of Government Ayurvedic Medical College, Bangalore was systematically reviewed and *Kaphahara* line of intervention was planned.

Results

The External Auditory canal of left ear was clear after 6 days of treatment as shown in photographs.

Discussion

Otomycosis is common fungal infection where treatment should be continued for a week even after apparent cure to avoid recurrences. Ear must also be kept dry as a preventive aspect. *Avachoorana*, a unique and quick acting procedure told in Ayurveda classics is discussed in the present study, in the context of Otomycosis.

KEYWORDS

Karna, Avachoorana, Otomycosis, Karna, Kandu



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INTRODUCTION

Otomycosis is a fungal infection of the ear canal that often occurs due to *Aspergillus niger*, *A. fumigatus* or *Candida albicans*. It is seen in hot and humid climate of tropical and subtropical countries. Secondary fungal growth is also seen in subjects using topical antibiotics for treatment of otitis externa or middle ear suppuration. The *clinical features* of Otomycosis include intense itching, discomfort or pain in the ear, watery discharge with a musty odour and ear blockage. The fungal mass may appear white, brown or black and has been likened to a wet piece of filter paper. Examined with an otoscope, *A. niger* appears as black headed filamentous growth, *A. fumigatus* as pale blue or green and *Candida* as white or creamy deposit¹. Meatal skin appears sodden, red and oedematous. *Treatment* consists of 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. Specific antifungal agents can be applied. Nystatin (100,000 units/ml of propylene glycol) is effective against *Candida*. Other broad-spectrum antifungal agents include clotrimazole and povidone iodine. Two percent salicylic acid in alcohol is also effective. It is a keratolytic agent which

removes superficial layers of epidermis, and along with that, the fungal mycelia growing into them. Antifungal treatment should be continued for a week even after apparent cure to avoid recurrences. Ear must be kept dry. Bacterial infections are often associated with Otomycosis and treatment with an antibiotic/steroid preparation helps to reduce inflammation and oedema and thus permitting better penetration of antifungal agents. This fungal infection of the external ear can be compared with *Karna Kandu*, which presents symptoms such as excessive itching in the *Karna* due to excessive accumulation of *Prakupita Kapha* in the *Karna Srotas*².

OBJECTIVES

1. To understand Otomycosis under the purview of *Karna Kandu*.
2. To study the effect of *Tankana Bhasma Avachoorana*³ in Otomycosis.

MATERIALS AND METHODS

Case report

Basic information of the subject:

Age: 21 years

Sex: Female

Religion: Hindu

Occupation: Student

Socioeconomic status: Upper middle class

Chief complaints:



Itching and pain in left ear since 3 days.

History of present illness:

The subject complains of itching and pain in left ear since 3 days which aggravates during night time. The subject being a student in Govt. Ayurveda Medical College Bangalore approached Shalakyatantra OPD of Government Ayurveda Medical College, Bangalore for the needful.

History of past illness:

Nothing significant.

Personal history:

- a) Aharaja: Untimely eating habits and diet is predominantly with *Katu-Amla rasa* (spicy & sour diet)
- b) Viharaja: The subject has a habit of sleeping late in the night (after 12 am).

Examination:

1. *Prakriti* (Constitution): *Kapha-Vataja prakriti*
2. Vitals were normal.
3. Respiratory system, cardiovascular system and per abdomen showed no abnormality.
4. Central nervous system: No abnormality detected.
5. ENT examination:
 - A. i) Right ear: Tympanic membrane: Intact
External Auditory canal (EAC): Clear
 - ii) Left ear: Tympanic membrane: Intact
External Auditory canal: *Candida albicans* fungal infestation (+) as shown in Figure (1).

B. Tests of hearing:

- i) Rinne's test: Right ear- Rinne's positive
Left ear- Rinne's positive
- ii) Weber's test: No lateralization.

Diagnosis:

Otomycosis- Left ear

Treatment adopted:

1. *Shamana Aushadhi* (for initial 2 days):
 - i. *Triphala Guggulu* 1-0-1 for 2 days
 - ii. *Gandhaka Rasayana* 1-0-1 for 2 days
2. *Karna Shodhana* and *Avachornana* (for next 4 days):
 - A. *Poorva karma*:
 - i. Subject is made to lie comfortably in right lateral position
 - ii. Suction is done to remove fungal mass
 - iii. Wet mopping done using *Triphala Kashaya*.



Figure 1 Endoscopic photograph of right EAC before treatment (Day 1)

- iv. Dry mopping done using dry cotton.
 - B. *Pradhana karma*:
 - i. A pinch of *Tankana Bhasma* is taken in small sized spatula and is dusted into External Auditory Canal by observing through Otolaryngeal 0-degree endoscope



.The same procedure is repeated for 2 more times.

ii. Subject is made to relax in the same position for 5 minutes.

C. *Pashchath karma*

- *Karna Dhoopana* using *Nimba, Guggulu, Vacha, Haridra*.

Assessment criteria:

Objective criteria: Endoscopic photographs, before and after the treatment.

RESULTS

1. There was a considerable decrease in itching in left ear.

2. Left External Auditory Canal was clear after the treatment as shown in figure (2).



Figure 2 Endoscopic photograph of right EAC after treatment (Day 7)

DISCUSSION

For *Karna kandu, Nadi Sweda, Vamana, Dhoomapana, Shirovirechana* and all *Kaphahara* measures are advised in *Sushruta Samhita*⁴.The *Avachornana*

procedure that is selected for present study is a form of *Rookshana* procedure which reduces *Kapha Dosha*. The role of *Karna Dhoopana* is also same as *Karna Avachornana*, but there is more bio-availability of medicine in case of *Karna Avachornana*. Hence *Karna Dhoopana* is selected as a supportive treatment and a *Pashchat Karma*. The etiology of Otomycosis is entry of moisture into external ear, as a result of swimming or bathing etc. It is the *Kleda Guna* that is causing *Kapha Sanchaya* in external ear. In the present case, oral medicines were given initially for two days to bring down the pain. After two days of oral medicines, there was not much relief and *Tankana Bhasma Avachornana* (Dusting) was planned for next four days. The rationality behind selection of these medicines are justified in Table 1. There was considerable amount of reduction in itching on the second day after *Avachornana* and EAC of left ear was clear on completion of four days of *Karna Avachornana*.

CONCLUSION

Local treatment is more beneficial in Otomycosis than oral medication, *Tankana Bhasma* is easily available, cost effective and can be used even in children as there is no irritation when *Tankana Bhasma* comes



in contact with skin of external auditory canal, which is otherwise very sensitive. *Avachoomana* with other *Krimihara Dravyas* can also be taken for future research.



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