

**EFFECT OF CHARAKOKTA KANDUGHNA TAILA KARNAPICHU AND KASHAYA INTERNALLY ON KARNAKANDU (OTOMYCOSIS) - A PILOT STUDY**

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**ABSTRACT**

Karnakandu is one among karnaroga and also a nidana for many other karnarogas. It is characterized by severe itching sensation due to vitiated kaphadosha. This condition can be correlated to otomycosis, which is fungal infection of ear canal characterized by intense itching, pain in the ear and ear blockage. The incidence of fungal infection is high in hot and humid climate of tropical and subtropical countries. In otomycosis, treatments consist of thorough aural toileting and application of antifungal agents. The rate of recurrence is high. In Ayurveda Nadisweda, Vamana, Dhumapana, Teekshna Nasya and all other Kaphahara chikitsa are advocated for management of karnakandu. Since sthanika chikitsa is more efficacious in jatrurdhwagatavyadhi, developing kanduhara karnapurana or pichu was of high need. With these ideas a taila and kashaya prepared out of charakokta kandughna gana dravya was used in management of karnakandu as pilot study. The present study was done on 20 patients of Karnakandu, who were divided into two equal groups. Group-A was treated with charakokta kandughna Taila Karnapichu with kandughna kashaya internally for 7 days and Group-B with only Charakokta kandughna tailakarna pichu for 7 days. The signs and symptoms were studied before and after treatment. The data of both the groups were collected according to the objective and subjective Parameters. From the above study it can be concluded that patients treated with charakokta kandughna Taila Karnapichu with or without kandughna kashaya internally showed marked relief of symptoms. But the group with kandughna kashaya internally showed better result and absence of recurrence.

**KEYWORDS:** Karnakandu, Otomycosis, Kadughnataila, kandughna kashaya, Karnapichu

**INTRODUCTION**

*Karnakandu* is a disease of ear characterized by severe itching sensation and inflammation in the ear canal caused due to vitiated kapha dosha<sup>1</sup>. This condition can also be due to *vatakapha dushti*<sup>2</sup>. Otomycosis is the fungal infection of ear canal characterized by intense itching, pain in the ear and ear blockage. It is seen in hot and humid climate of tropical and subtropical countries. Secondary fungal

growth is also seen in long term usage of topical antibiotics for treatment of otitis externa or media<sup>3</sup>.

The prevalence of otomycosis is 5.2% all over world and 9% in India. Further 5-25% of otitis externa cases are due to otomycosis. The 90% of fungal infections involve *Aspergillus* species and the rest *Candida* species<sup>4</sup>.

The treatment of *Karnakandu* includes Nadisweda, Vamana, Dhuma, Nasya and Kaphahara chikitsa<sup>5</sup>. Otomycosis is treated with aural toileting by syringing, suction or mopping and application of antifungal agents like Nystatin, clotrimazole and povidone iodine. This should be continued for a week even after apparent cure to avoid recurrences<sup>6</sup>.

Since *sthanika chikitsa* is more efficacious in *jatrurdhwagata vyadhi*, developing *kanduhara karnapurana* or *pichu* was of high need. With these ideas a *taila* and *kashaya* prepared out of *Charakokta kandughna gana dravya* was used in management of *karnakanduas* pilot study<sup>7</sup>.

### AIMS AND OBJECTIVES

-To assess the efficacy of *charakokta kandughna taila karnapichu* with *kandughna kashaya* internally in the management of *Karnakandu* (Otomycosis).

-To assess the efficacy of *Charakokta kandughna taila karnapichu* in the management of *Karnakandu* (Otomycosis).

-To compare the efficacy of both.

### MATERIALS AND METHODS

#### Source of Data:

OPD and IPD of *Shalakaya Tantra*, SJGAMC & Hospital, Koppal.

#### Methods of collection of data:

20 Patients affected with *karnakandu*, fulfilling inclusion criteria and willing to take part in study were selected and randomly divided in to two equal groups of 10 patients each.

#### Inclusive Criteria:

Patients with clinical features of *Karnakandu* (Otomycosis).

#### Exclusion criteria:

Patients of Otitis media and other varieties

of otitis externa.

#### Study design:

Open labeled clinical comparative study.

-Group A – treated with *charakokta kandughna taila karnapichu* and *kandughna kashaya* (15millilitres two times a day before food) internally for 7 days.

-Group B – treated with *charakokta kandughna tailakarnapichu* for 7 days.

#### Duration:

- Treatment period: 7 days
- Follow-up period: 14 days.
- Total study Duration 21 days

#### Assessment criteria:

Assessment was done based on the subjective and objective parameters of *karnakandu* and otomycosis before, during and after treatment.

#### Subjective parameters:

- *Karnakandu*.
- Earache.
- Ear blockage.

| Parameters | BT | 4 <sup>th</sup> Day | 8 <sup>th</sup> Day | 14 <sup>th</sup> Day | 21 <sup>st</sup> Day |
|------------|----|---------------------|---------------------|----------------------|----------------------|
| Karnakandu |    |                     |                     |                      |                      |
| Earache    |    |                     |                     |                      |                      |

#### Objective parameters:

-Otosopic examination (Fungal mass).

-Tuning fork test (Rinne test)

-Intensity of pain assessed using visual analogue scale.

| Objective parameters | BT | 4 <sup>th</sup> Day | 8 <sup>th</sup> Day | 14 <sup>th</sup> Day | 21 <sup>st</sup> Day |
|----------------------|----|---------------------|---------------------|----------------------|----------------------|
| Otosopic examination |    |                     |                     |                      |                      |
| Tuning fork test     |    |                     |                     |                      |                      |

## GRADING OF PARAMETERS: (SUBJECTIVE)

### Karnakandu & Karnashoola: VAS

| visual analogue scale reading | Grading |
|-------------------------------|---------|
| No pain, No itching           | 0       |
| Mild                          | 1       |
| Moderate                      | 2       |
| Severe                        | 3       |

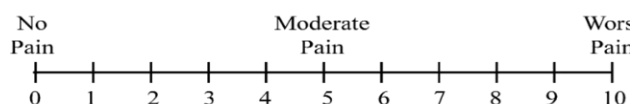
### Objective Parameters:-

| Otosopic examination        | Grading |
|-----------------------------|---------|
| No fungal mass              | 0       |
| Half packed EAC with fungal | 1       |
| Full packed EAC with fungal | 2       |

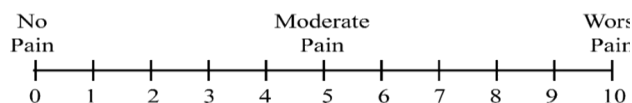
| Tuning fork test | Grading |
|------------------|---------|
| AC>BC            | 0       |
| BC>AC            | 1       |

### Visual Analogue Scale

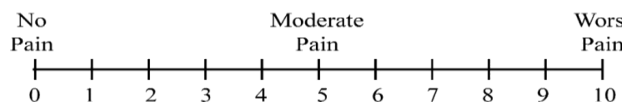
#### Day 1



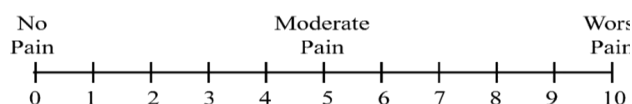
#### Day 4



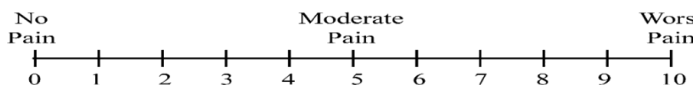
#### Day 8



#### Day 14



#### Day 21



No Pain(0); Mild(1-3); Moderate(4-6); Severe (7-10)

### Preparation of Charakokta Kandugna Taila<sup>8</sup>:

Taila and kashaya contains ten drugs viz.

| Ingredients | Botanical Name                   | Quantity for kalka (grams) | Quantity for Kashaya(grams) |
|-------------|----------------------------------|----------------------------|-----------------------------|
| Chandana    | <i>Santalum album</i>            | 6                          | 25                          |
| Nalada      | <i>Vetiveria zizanoides</i>      | 6                          | 25                          |
| Krutamala   | <i>Cassia fistula</i>            | 6                          | 25                          |
| Naktamala   | <i>Pongamia pinnata</i>          | 6                          | 25                          |
| Nimba       | <i>Azadiracta indica</i>         | 6                          | 25                          |
| Kutaja      | <i>Holarrhena antidycentrica</i> | 6                          | 25                          |
| Sarshapa    | <i>Brassica campestris</i>       | 6                          | 25                          |
| Madhuka     | <i>Glycyrrhiza glabra</i>        | 6                          | 25                          |
| Daruharidra | <i>Berberis aristata</i>         | 6                          | 25                          |
| Musta       | <i>Cyperus rotundus</i>          | 6                          | 25                          |

- Tilataila (250 ml)

### Kalka for taila preparation:

6grams of fine powders of each drugs mixed with cold and made it into paste.

### Kashaya for taila preparation:

25 grams of coarse powder of each drugs mixed with four litres of water, boiled (in mandagni) and reduced into one litre.

### Preparation of Charakokta Kandugna taila:

Taila was prepared by taila murchana methods.

*Kandugna taila* has *tikta, madhura, katu, kashaya rasa* and *Ruksha, Laghu, Tikshna, mrudu, guru, snigdha Guna, Sheetaveerya (chandana, nalada, krutamala, nimba, kutaja, madhuka, musta) & UshnaVeerya (naktamala, sarshapa, daruharidra), KatuVipaka* (except *krutamala* and *madhuka* are *madhura vipaka*), and *tridosha shamaka* and *kandugna,krimighna*<sup>9</sup>.

**Preparation of Charakokta Kandugna kashaya:-**

*Kashaya* was prepared from 15 grams coarse powder of above mentioned drug mixed with 240 milliliters of water (reduced to 60 ml).

**Observations and Results:**

**Complete relief:** 100 % relief from symptoms

**Partial relief:**

Marked : Up to 75%;

Moderate : 50 % - 75%;

Mild : 25 % - 50%

No relief : Without relief 0%

**Table No: 1 showing the Distribution of Age**

| Age in Years | Groups |    | Percentage |         |
|--------------|--------|----|------------|---------|
|              | A      | B  | Group A    | Group B |
| 20-35        | 08     | 07 | 80%        | 70%     |
| 36-50        | 02     | 02 | 20%        | 20%     |
| 51-65        | 00     | 01 | 0%         | 10%     |

**Table No: 2 showing the Distribution of Gender**

| Gender | Groups |    | Percentage |         |
|--------|--------|----|------------|---------|
|        | A      | B  | Group A    | Group B |
| Male   | 06     | 05 | 60%        | 50%     |
| Female | 04     | 05 | 40%        | 50%     |

**Table No: 3 showing the Distribution of Economic Status**

| Economic Status | Groups |    | Percentage |         |
|-----------------|--------|----|------------|---------|
|                 | A      | B  | Group A    | Group B |
| Poor            | 08     | 07 | 80%        | 70%     |
| Middle class    | 02     | 02 | 20%        | 20%     |
| Rich            | 00     | 01 | 0%         | 10%     |

**Table No: 4 showing the Distribution of Duration**

| Duration   | Groups |    | Percentage |         |
|------------|--------|----|------------|---------|
|            | A      | B  | Group A    | Group B |
| <10 days   | 06     | 07 | 60%        | 70%     |
| 10-30 days | 03     | 02 | 30%        | 20%     |
| >30 days   | 01     | 01 | 10%        | 10%     |

**Table No: 5 showing the Distribution of Sides affected**

| Sides affected | Groups |    | Percentage |         |
|----------------|--------|----|------------|---------|
|                | A      | B  | Group A    | Group B |
| Unilateral     | 09     | 10 | 90%        | 100%    |
| Bilateral      | 01     | 00 | 10%        | 0%      |

**Table No: 6 showing the Distribution of Signs and Symptoms**

| S.No | Signs & Symptoms | No. of Patient Before Treatments |         | After Treatment |         |              |         | Percentage Of Relief |         |
|------|------------------|----------------------------------|---------|-----------------|---------|--------------|---------|----------------------|---------|
|      |                  |                                  |         | Relieved        |         | Not relieved |         |                      |         |
|      |                  | Group A                          | Group B | Group A         | Group B | Group A      | Group B | Group A              | Group B |
| 1    | Itching in ear   | 10                               | 10      | 10              | 10      | 00           | 00      | 100                  | 100     |
| 2    | Earache          | 10                               | 10      | 10              | 10      | 00           | 00      | 100                  | 100     |
| 3    | Aural blockage   | 10                               | 10      | 10              | 10      | 00           | 00      | 100                  | 100     |
| 4    | Fungal mass      | 10                               | 10      | 10              | 10      | 00           | 00      | 100                  | 100     |

**Table No: 7 showing the Distribution of Signs and Symptoms**

| Duration        | Groups |    | Percentage |         |
|-----------------|--------|----|------------|---------|
|                 | A      | B  | Group A    | Group B |
| Complete relief | 10     | 10 | 100%       | 100%    |
| Partial relief  | 00     | 00 | 0%         | 0%      |
| No relief       | 00     | 00 | 0%         | 0%      |

### RESULT

The signs and symptoms such as itching in ear, earache, aural blockage and presence of fungus in ear canal were studied before and after treatment. Result showed marked relief of symptoms in both groups. But the group with *kandughna kashaya* internally showed better result and absence of recurrence.

### DISCUSSION

*Karnakandu* is characterized by severe itching sensation due to vitiated *kapha dosha*. This condition can be correlated to otomycosis, which is fungal infection of ear canal characterized by intense itching, pain in the ear and ear blockage. In otomycosis, treatments consist of thorough aural toileting and application of antifungal agents. The rate of recurrence is high. In *Ayurveda*

*Nadisweda, Vamana, Dhumapana, Teekshna Nasya* and all other *Kaphahara chikitsa* are advocated for management of *karnakandu*. *Charakokta kandugna Taila* contains 10 drugs viz. *chandana (Santalum album), Nalada (Vetiveria zizanoides), Krutamala (Cassia fistula), Naktamala (Pongamia pinnata), Nimba (Azadiracta indica), Kutaja (Holarrhena antidycentrica), Sarshapa (Brassica campestris), Madhuka (Glycyrrhiza glabra), Daruharidra (Berberis aristata), Musta (Cyperus rotundus). Kandugna taila and kashaya has tikta, madhura, katu, kashaya rasa and Ruksha, Laghu, Tikshna, mrudu, guru, snigdha Guna, Sheetaveerya (chandana, nalada, krutamala, nimba, kutaja, madhuka, musta) & Ushna Veerya (naktamala, sarshapa, daruharidra), Katu Vipaka (except krutamala and madhuka are madhura vipaka), and tridosha shamaka and kandugna. Kandughna Taila and kashaya act on *karnakandu* mainly in two ways *Shodhana* and *Ropana* which help in proper healing of *kandu*, acts as in *Snehana, Shodhana, Ropana, kandughna and krimighna*.*

The present study was done on 20 patients of Karnakandu, who were divided into two equal groups. Group-A was treated with Charakokta kandughna Taila Karnapichu with kandughna kashaya internally for 7 days and Group-B with only Charakokta kandughna taila karnapichu for 7 days. The signs and symptoms such as itching in ear, earache, aural blockage and presence of fungus in ear canal were studied before and after treatment. Result shows marked relief of symptoms in both groups. But the group with kandughna kashaya internally showed better result and absence of recurrence.

### CONCLUSION

Kandughna Taila and kashaya act on karnakandu mainly in two ways Shodhana and Ropana which help in proper healing of kandu, acts as in Snehana, Shodhana, Ropana, kandughna and krimighna. The signs and symptoms such as itching in ear, earache, aural blockage and presence of fungus in ear canal were studied before and after treatment. Result shows marked relief of symptoms in both groups. But the group with kandughna kashaya internally showed better result and absence of recurrence.

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