

## ROLE OF MADHUKADI TAILA KARNAPICHU AND RASNADI GUGGULU IN KARNASRAVA (CHRONIC SUPPURATIVE OTITIS MEDIA)

Gupta Jyoti                      Fiaz Shamsa                      Sharma Aparna  
Department of Shalaky Tantra, NIA, Jaipur, Rajasthan, India

### ABSTRACT

*Karnasrava* is a commonly occurring clinical condition in Indian population especially in poor and underprivileged children. It is an important cause of hearing loss, particularly in the developing world. The approach to treatment has been unsatisfactory, expensive and often difficult; for example parenteral antibiotics require long hospitalization and drugs are potentially ototoxic. However, such a treatment does not always provide satisfactory improvement in hearing, and is inaccessible in many developing countries. Keeping in view all these facts, a randomized prospective clinical trial was done in P.G. Department of *Shalakyatantra* NIA, Jaipur (Raj.) in which total 40 patients, were divided into two groups of 20 patients each. Group (I) was treated with *Madhukadi Taila Karnapichu* and *Rasnadi Guggulu* orally and Group (II) with *Madhukadi Taila Karnapichu* only. Significant results were found in the signs and symptoms of this disease.

**Keywords:** *Karnasraava*, CSOM, *Madhukadi Taila*, *Rasnadi Guggulu*

### INTRODUCTION

*Karnasrava* is a disease mentioned by *Acharya Sushruta* in the chapter named *Karnaroga Vigyāniya*. He has counted *Karnasrava* as a disease entity under 28 *Karnarogas*.<sup>1</sup> *Acharya Charaka* included *Karnasrava* as a symptom under the four types of *Karnarogas* caused due to vitiation of different *doshas*.<sup>2</sup> *Acharya Vagbhata* has not described *Karnasrava* separately but considered it under *Karnashula*.<sup>3</sup>

Chronic suppurative otitis media (CSOM) is the result of an initial episode of acute otitis media and is characterized by a persistent discharge from the middle ear through tympanic perforation. It is an important cause of preventable hearing loss, particularly in the developing world.

Prevalence surveys, sampling methods, and methodologic quality, show that the global burden of illness from CSOM

involves 65–330 million individuals with draining ears, 60% of whom (39–200 million) suffer from significant hearing impairment. CSOM accounts for 28000 deaths and a disease burden of over 2 million Disability-adjusted life-years (DALYs).

Patients of CSOM with intracranial or extracranial infections are more appropriately treated with surgery. However, such treatment is costly and does not always lead to satisfactory hearing improvement, and is inaccessible in many developing countries.

Daily instillation of topical antiseptics or antibiotics after meticulous aural toilet for at least 2 weeks appears to be the most cost-effective.

Considering all these points, there is a need to evolve out a safe drug which is economical and within the reach of com-

mon people. In Ayurveda various formulations are described under *Karnaroga Chikitsa Adhyāya*, which signifies the scope of research for better approach to the disease *Karnasrava*. *Madhukadi Taila Karnapichu* and *Rasnadi Guggulu* had been selected for the present study which is mentioned in *Bhaishajya Ratnavali*<sup>4</sup> and *Yoga Ratnakar* in the *Karnarogadhikar*. All the ingredients are having *Vrana ropana*, *Jantughna*, *Shothara* and *Vedanahara* properties.

In *Shalakya*, along with systemic medication more emphasis is laid upon local treatment by *Acharya Sushruta*. This disease also has chiefly local etiological factors; therefore local drug administration was selected as mentioned by *Acharya Sushruta* in the form of *Karnapichu*.

### **AIMS AND OBJECTIVES**

To evaluate the efficacy of *Madhukadi Tailam Karnapichu* and *Rasnadi Guggulu* internally in *Karnasrava* on various scientific parameters

### **MATERIALS AND METHODS**

The study was conducted on 40 patients of *Karnasrava* selected from OPD and IPD of PG Dept of *Shalakya Tantra*, NIA, Jaipur. Study design – prospective, randomized, comparative study.

#### **a) Inclusion Criteria**

- Age group between 5-50 years
- Specific symptoms of *Karnasrava* like *baadhirya*, *karnashula*, *karnakandu* etc

#### **b) Exclusion Criteria**

- Below 5 and above 50 years
- Pregnant women
- Systemic diseases like Diabetes, Tuberculosis, and Hypertension etc.
- Patients having other aural pathologies like Otomycosis, Otitis externa, Furunculosis, Cholesteotoma.

**Administration of drugs and grouping of patients:** 40 clinically diagnosed patients of *Karnasrava* were registered and randomly divided into two groups with 20 patients in each group.

**Group I:** *Madhukadi Taila Karnapichu* once daily and *Rasnadi Guggulu* orally 2 tabs twice daily for 1 month

**Group II:** Only *Madhukadi Taila Karnapichu* once daily for 1 month.

#### **Criteria of assessment**

**Clinical (Subjective) Parameters** – *Karnasraava*, amount of *Karnasraava*, *Karnashula*, *Karnakandu*, *Karna baadhirya*, *Karnanaada* etc. were done by a special scoring pattern.

**Investigation (Laboratory Parameters)** - Hb%, TLC, DLC, ESR, RBS.

### **OBSERVATIONS AND RESULTS**

**Demographic profile** – In the present study maximum 25% patients belong to the age group 5-15 years, 60% patients were males, 75% were Hindu, 70% patients were residents of rural area, 35% patients were students and 50% patients belonged to lower middle class. Majority of the patients had *Vata-Kaphaja Prakriti* (45%), 67.5% were of *Rajasika Manasa Prakriti*. Maximum no. of patients i.e. 85% patients were having history of *Pratishayaya*(common cold) as etiological factor. Majority of the patients had unilateral ear discharge (82.5%) in which left ear discharge was 55%. Maximum numbers of patients were suffering from *karnasrava* for more than 1 year (32.5%). Symptoms of *Karnasrava* were found in decreasing order of percentage as- ear discharge (100%), deafness (65%), itching in ear (45%), earache (37.5%), tinnitus (23.33%), vertigo and headache (2.5%) each.

**Table 1: Showing effect of Therapy in Subjective Parameters in Group-I (Wilcoxon matched paired single ranked test)**

| Variable                | Mean |      | Mean Diff. | % Relief | SD±   | SE±  | W   | p     | S  |
|-------------------------|------|------|------------|----------|-------|------|-----|-------|----|
|                         | BT   | AT   |            |          |       |      |     |       |    |
| Quantity of Karnasraava | 2.04 | 0.54 | 1.5        | 73.46    | 0.722 | 0.14 | 276 | 0.001 | HS |
| Consistency of sraava   | 2.33 | 0.87 | 1.45       | 62.5     | 0.658 | 0.13 | 253 | 0.001 | HS |
| Karnashula              | 1.44 | 0.22 | 1.22       | 84.61    | 0.44  | 0.14 | 45  | 0.003 | HS |
| Karna kandu             | 1.77 | 1.11 | 0.66       | 37.5     | 0.5   | 0.16 | 21  | 0.031 | S  |
| Karna-baad-hirya        | 1.57 | 1.26 | 0.315      | 20       | 0.477 | 0.10 | 21  | 0.031 | S  |
| Karnanaada              | 1.69 | 1.15 | 0.53       | 31.81    | 0.51  | 0.14 | 28  | 0.015 | S  |

**Table 2: Showing effect of Therapy in Subjective Parametres in Group-II (Wilcoxon matched paired single ranked test)**

| Variable                | Mean |      | Mean Diff. | % Relief | SD±   | SE±  | W   | p     | S  |
|-------------------------|------|------|------------|----------|-------|------|-----|-------|----|
|                         | BT   | AT   |            |          |       |      |     |       |    |
| Quantity of Karnasraava | 2.04 | 0.62 | 1.41       | 69.38    | 0.50  | 0.1  | 300 | 0.001 | HS |
| Consistency of sraava   | 2.33 | 1.00 | 1.33       | 57.14    | 0.637 | 0.13 | 300 | 0.001 | HS |
| Karnashula              | 1.58 | 0.75 | 0.83       | 52.63    | 0.389 | 0.11 | 55  | 0.002 | HS |
| Karna kandu             | 1.66 | 1.2  | 0.466      | 28       | 0.51  | 0.13 | 28  | 0.015 | S  |
| Karna baad-hirya        | 1.26 | 1.00 | 0.266      | 26       | 0.457 | 0.11 | 10  | 0.12  | S  |
| Karnanaada              | 1.2  | 0.4  | 0.8        | 66.66    | 0.447 | 0.2  | 10  | 0.125 | NS |

**DISCUSSION**

**Effect of therapy**

**Quantity of karnasrava** - Relief in the symptom of Quantity of karnasrava was observed 73.46% in Group- I (p<0.001), and 69.38% in Group- II (p<0.001). Even though all these values are highly significant statistically, combined group (Group-I) shows more result than Group-II.

**Consistency of karnasraava** –The present study clearly reveals that the results of therapy in symptom of consistency of karnasraava in patients of both the groups were statistically highly significant (p<0.001). The percentage of relief was

62.5% and 57.14% in Group-I and Group-II respectively.

**Karnashula** – In present study there was 84.61% of improvement in karnashula in Group-I (p=0.003) and 52.63% in group-II (p=0.002), both of them were significant but combined group showed alone better result than single group. Hence Madhukadi taila karnapichu alone is not so efficacious in treatment of Karnashula.

**Karnakandu** – The present study showed, mild relief in the symptom of karnakandu in patients of Group-I (37.5%) and 28% in patients of Group-II. Both of the groups showed statistically significant results. For

Group-I  $p=0.031$  and for Group-II  $p=0.015$ .

**Karnabaadhira** – In the present study, mild relief was seen in the symptom of *Karnabaadhira* in patients of Group-I (20%) which is statistically significant ( $p=0.031$ ) and Group-II (26%) which is also statistically significant ( $p=0.12$ ). This may be due to presence of large and permanent perforation of TM which could not healed in one month therapy.

**Karnanaada** - There was considerable relief in the symptom of *Karnanaada* in patients of Group-I (31.81%) which is statistically significant ( $p=0.015$ ) and Group-II (66.66%) which is statistically insignificant ( $p=0.125$ ).

#### **Probable mode of action of madhukadi taila and rasnadi guggulu**

*Madhukadi Taila* was prepared by *Tailapaaka Vidhi* upto *Kharapaaka* state<sup>5</sup>, as indicated for *Karnapichu*<sup>6</sup>. *Rasa* of all the drugs of *Madhukadi Taila and Rasnadi guggulu* are *Katu* and *Tikta*; *Guna* are *Ruksha*, *Laghu*, *Tikshna*; *Snigdha* and *Ushna Veerya* and mainly of *Kapha-Vaata Shaamaka* properties.

*Katu Rasa* is dominated with *Vaayu* and *Agni Mahaabhuta*. It is *Deepana*, *Paachana*, *Shodhana*, *Krimihara*, *Kanduhara*, *Shwayathuhara*, *Kledahara*, *Malahara*, *Vrana Avasaadaka* and *Kapha Shaamaka*.<sup>7</sup>

*Tikta Rasa* is dominated with *Vaayu* and *Aakaasha Mahaabhuta*. It is *Deepana*, *Shodhana*, *Kanduhara* and *Puyashoshanakara*<sup>8</sup>. It induces cleanness, dryness and keenness. With *Krimighna* and *Puyashoshanakara* properties it will help to remove ear debris, discharge and reduces itching.

With the properties of *Katu* and *Tikta Rasa*, it will encounter *Vaata* and *Kapha Dosha*. Due to *Sraava*, healing process hampered in *Vrana*. *Katu* and

*Tikta Rasa* contain *Shodhana* property which can help to open channels and clean the wound ultimately promoting healing process.

*Madhukadi Taila and Rasnadi Guggulu*, both have *Ruksha*, *Laghu*, *Tikshna Guna*. *Ruksha Guna* is having *Shoshana Shakti* which will absorb the discharge in auditory canal and encounter the *Kapha Dosha*. *Laghu Guna* has *Lekhana* and *Ropana* properties which will help in healing of wound. *Tikshna Guna* is *Shighrakaari* which starts its action very quickly and will encounter *Vaata* and *Kapha Dosha*.

*Ushna Veerya* is another property of *Madhukadi Taila and Rasnadi Guggulu*. Due to *Ushna Veerya* it will encounter *Vaata Dosha* and *Gati* of *Vaata* gets normalized (*Anulomana*). This way it will work on functional mechanism. Another benefit of *Ushna Veerya* is that it enhances local as well as general metabolism. Because of this, it will correct *Dhaatuposhana Krama* and ultimately it will leads to production of *Uttama Twaka* and *Maamsa Dhaatu*.

#### **CONCLUSION**

Main etiological factor for CSOM is recurrent URTI (*Pratishayaya*) which justify the fact that the *Pratishayaya* is an important cause in manifestation of *Karnasraava*. CSOM (safe type) can be correlated with *Vaata Kaphaja Karnasraava* as the discharge was found mucoid or mucopurulent in nature. For *Karnapichu*, *taila* should be prepared to achieve the stage of *Kharapaaka*. If there is water content in *taila* then it will provide a favourable condition for the growth of fungus. CSOM has no relation with particular occupation but children of school going age are more prone to this disease in present study. Present study shows lower middle class people are mostly affected in this disease.

Maximum no. of patients had chronicity above one year. *Pathyapathya* should be followed properly especially in *sheeta ahara- vihara* for effective management. Regular cleaning and dry mopping of ear canal is necessary before every application for better efficacy. The principles of *Dushtavrana Chikitsaa* can be adopted in treatment of *Karnasraava*. Local treatment is more effective than systemic administration as it tackles the disease effectively.

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#### **CORRESPONDING AUTHOR**

Dr. Jyoti Gupta

PG Scholar, Dept of Shalaky Tantra

National Institute of Ayurveda

Amer Road, Jaipur – 302002

Email: jyotiguptania@gmail.com

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