

COMPARATIVE STUDY ON THE EFFICACY OF
VACHA LASHUNAADI TAILA KARNA PICHU AND NIMBA
PATRAADI DHOOPANA IN THE MANAGEMENT OF KARNA SRAVA

¹Shashikala.D.K,

²Mohankumari.K.M,

³Mahamad Yunus

1. Asst professor Dept of P.G.Studies in Shalakya Tantra S.J.G. Ayurvedic Medical College Koppal, Karnataka
2. Professor Dept of Shalakya Tantra Govt Ayurvedic Medical College Mysore, Karnataka
3. Asst professor Dept of P.G.Studies in Roganidana Shri.J.G.C.H.S.Ayurvedic Medical College Ghataprabha, Karnataka

ABSTRACT :

Karna srava is one among the *karna rogas* (Diseases of ear). The term *karna srava* is self-explanatory which means discharge from the ear. Classical features of *karnasrava* can be compared to chronic suppurative otitis media (CSOM), which remains as one of the most common childhood chronic infectious diseases worldwide, affecting diverse racial and cultural groups both in developing and industrialized countries. It involves considerable morbidity and can cause extra- and intracranial complications. The principle treatment modalities adopted in conventional system of medicine are long duration of antibiotics locally and orally, and surgical treatment. Antibiotics when used continuously cause certain adverse effects, whereas the surgical methods may lead to complications. Considering these drawbacks in modern medicine, the present study was taken up to evaluate the efficacy of *Vachalashunadi Taila Karnapichu* and *Nimbapatradi Karnadhoopana* in *Karnasrava*. A total of 40 patients having *karnasrava* were selected and randomly divided into 2 groups with 20 patients each. Group A was treated with *Vachalashunadi taila Karnapichu* and Group B was treated with *Nimbapatradi Karnadhoopana*. Subjective parameter hearing loss and objective parameters ear discharge, perforation of tympanic membrane and pure tone audiometry were considered. These were suitably graded to assess the results based on the clinical observations. Statistical tests were applied to analyze the results. In the present study it was observed that the percentage of success of Group A was 38.6% and that of Group B was 30.5%, with the percentage difference of 8.1% Group A showed better results when compared to Group B.

Key words: *Karna srava*, chronic suppurative otitis media, *Vachalashunadi taila Karnapichu*, *Nimbapatradi Karnadhoopana*

INTRODUCTION: Ayurveda is the science of Life practiced since ages. Knowledge is perceived through five *Gyanendriyas* (Sense organs) and these are also included among twelve *Pranas*¹. An object is said to be living when it contains *Indriyas* otherwise, it is considered as non-living. The above description signifies the importance of sense organs. *Sravanendriya* (Sense of hearing) is one among the five

Gyanendriyas; its adhisthana is known as *Srotra* (Ear). The prevalence rate of CSOM is 46 and 16 persons per thousand in rural and urban population respectively. The principle treatment modalities adopted in conventional system of medicine are long duration of antibiotics locally and orally, and surgical treatment like tympanoplasty, mastoidectomy, Failure of the graft is one of the main drawbacks of

these surgeries. These treatments are expensive and beyond the reach of the common man and presence of this disease in early childhood can hamper the speech development of child after lowering the hearing level. In school children, there will also be hinderance in the learning, because of reduced hearing. Hence the present study was taken up to evaluate the efficacy of *Vachalashunadi Taila Karnapichu* and *Nimbapatradi Karnadhoopana* in *Karnasrava*.

AIMS AND OBJECTIVES:

- To know the efficacy of *Vacha lasshunadi Karnapichu* in the management of *Karnasrava*.
- To know the efficacy of *Nimba patradi Karnadhoopana* in the management of *Karnasrava*.
- To compare the effects of *Vacha lasshunadi taila Karnapichu* and *Nimba patradi Karna Dhoopana*

MATERIALS AND METHODS: A total of 40 patients having the features of *Karnasrava* were selected for the study irrespective of sex, occupation, religion and socioeconomical status from *Shalakya tantra* OPD & IPD of Sri Jayachamarajendra Institute of Indian Medicine, Bangalore

Inclusion criteria:

1. Patients presenting with features of *karnasrava*, Safe or Tubo-Tympanic Chronic Suppurative otitis media without complications.
2. Patients in the age group of 5 to 60 years.

Exclusion criteria:

1. Patients aged below 5 years and above 60 years.
2. Attic, marginal and total perforations of tympanic membrane.
3. Patients with severe conductive, sensory-neural and mixed deafness.

4. Patients with blood stained ear discharge are excluded
5. Ear discharge associated with complications.
6. Ear discharge associated with other systemic disorders

Assessment criteria: It was made on the basis of following subjective and objective criteria conclusion was drawn on the basis of paired T test method.

Subjective criteria:

Impaired hearing

Objective criteria:

Ear discharge

Central perforation

Pure tone Audiometry

Study design: 40 patients selected were randomly divided into 2 groups. Group A and Group B with 20 patients each. **Group A** – will be treated with *Vacha lasshunadi taila karna pichu* twice a day for one hour for 2 sittings of 7 days each with an interval of 2 weeks i.e 30 days. **Group B** – will be treated with *Nimba patraadi dhoopana* for 5 minutes once a day for 2 sittings of 7 days each with an interval of 2 weeks i.e 30 days.

Parameters for the clinical study: Total duration of treatment was 30 days in each group. Patient was advised to come for consultation once in two weeks and the observations were recorded. There after the patients were reviewed once a month after treatment for next 3 months. The observations were made before, during and after treatment and assessed as per the subjective and objective parameters.

Criteria for assessment of response:

Good response: Above 75% relief in over all features.

Moderate response: 50%-75% relief in over all features.

Mild response: 25%-49% relief in over all features.

Poor response: Below 25% relief in over all features.

Table no: 1 Showing Scoring criteria of Subjective and Objective Criteria

| Subjective criteria | |
|----------------------------|---|
| Impaired hearing | 0 – Absent 1 – Unable to hear whispering voice 2 – Unable to hear normal voice 3 - Unable to hear loud voice |
| Objective criteria | |
| 1. Ear discharge | 0 – Absent 1 – Mild - scanty secretion near Tympanic membrane 2 – Moderate - Secretion irrigating in the ear canal 3 - Severe - secretions coming out of ear canal |
| Central Perforation | 0 – No perforation of tympanic membrane 1 – Mild - pin hole, small central perforation 2 – Moderate - large central perforation 3 - Severe – subtotal perforation |
| Pure tone audiometry | 0 – upto 25 dB 1 – 26 to 45dB 2 – 45 to 65dB 3 - more than 65dB |

Follow up study: After the completion of treatment, all the patients were advised to attend the O.P.D for three months at regular interval.

Composition of test drug:

***Vachalashunadi taila karna pichu*⁵**

Vacha (Acorus calamus Linn), *Lashuna* (Allium Sativum), *Haridra* (Curcuma longa), and *Bilwapatra* (Aegle marmelos) *swarasa*⁷

***Nimbapatradi karna dhoopan*⁶**

Nimbapatra (Azadirachta indica), *Vacha*(Acorus calamus Linn), *Hingu*(Ferula northax Bioss), *Sarpi*(Butyrum separatu), *Lavana*(Sodium Chloride) and *Sarshapa*(Brassica campestris)⁷

RESULTS: Total 40 patients were registered for the study and they were randomly distributed in two groups as Group A and Group B consisting of 20 patients each. Results of each group and comparative results of both groups analyzed by using Paired T test.

Assessment of overall results:

In Group A, out of 20 patients 1(5%) had good response. 5(25%) had moderate response. 11 (55%) had mild response.3 (15%) had poor response. In Group B out of 20 patients none had good response. 2 (10%) had moderate response.11 (55%). had mild response.7 (35%) had poor response

Table no: 2 Showing Statistical analyses of parameters in Group A

| Group A | Me an BT | Me an AT | Mean difference | % diff | SD | SE | T Value | P value | Remarks |
|---------------|----------|----------|-----------------|--------|-------|--------|---------|---------|---------|
| Ear discharge | 2.444 | 0.704 | 1.741 | 71.31 | 0.712 | 0.1371 | 12.701 | p<0.01 | HS |
| Perforation | 1.741 | 1.481 | 0.259 | 14.88 | 0.447 | 0.0859 | 3.0166 | p<0.01 | S |

| | | | | | | | | | |
|---|-------|-------|-------|-------|-------|--------|--------|--------|---|
| Conductive deafness(Pure tone audiometry) | 1.037 | 0.889 | 0.148 | 14.27 | 0.362 | 0.0696 | 2.1264 | p<0.05 | S |
| Impaired hearing | 1.111 | 0.815 | 0.296 | 26.66 | 0.465 | 0.0895 | 3.3086 | p<0.01 | S |

Table no:3 Showing Statistical analysis of parameters in Group B

| Group B | Mean BT | Mean AT | Mean difference | % diff | SD | SE | T Value | P value | Remarks |
|---|---------|----------|-----------------|--------|--------|--------|---------|---------|---------|
| Ear discharge | 2.286 | 0.892857 | 1.393 | 60.91 | 0.5669 | 0.1071 | 12.999 | P<0.001 | HS |
| Perforation | 1.643 | 1.5 | 0.143 | 8.07 | 0.3563 | 0.0673 | 2.1213 | P<0.05 | S |
| Conductive deafness(Pure tone audiometry) | 1.107 | 0.964286 | 0.143 | 12.91 | 0.3563 | 0.0673 | 2.1213 | P<0.05 | S |
| Impaired hearing | 1.178 | 0.964286 | 0.214 | 18.16 | 0.4178 | 0.0789 | 2.7136 | P<0.01 | S |

Table no:4 Showing Comparison of effect of treatment on Parameters in Group A and Group B

| Parameter | Groups | Mean | % of differ | SD | SE | T-value | P-value | Remarks |
|---|--------|--------|-------------|----------|--------|---------|---------|---------|
| Ear discharge | A | 1.7407 | 71.31 | 0.7121 | 0.1370 | 2.000 | p<0.05 | S |
| | B | 1.3928 | 60.91 | 0.5669 | 0.1071 | | | |
| Perforation | A | 0.2592 | 14.88 | 0.4466 | 0.0859 | 1.066 | p<0.05 | NS |
| | B | 0.1428 | 8.07 | 0.3563 | 0.0673 | | | |
| Conductive deafness(Pure tone audiometry) | A | 0.1481 | 14.27 | 0.3620 | 0.0696 | 0.05460 | p<0.05 | NS |
| | B | 0.1428 | 12.91 | 0.3563 | 0.0673 | | | |
| Impaired | A | 0.2963 | 26.6 | 0.465322 | 0.0895 | 1.066 | p<0. | NS |

| | | | | | | | | |
|---------|---|--------------|-----------|--------------|--------------|--|----|--|
| hearing | | | 6 | | 54 | | 05 | |
| | B | 0.2142 86 | 18.1 6 | 0.4178 55 | 0.0789 67 | | | |

Table no 5: Showing Assessment of overall results in Group A and B at the end of treatment

| Response | Group A | Group B | Total | |
|----------|---------|---------|-------|------|
| | | | No | % |
| Good | 1 | 0 | 1 | 2.5 |
| Moderate | 5 | 2 | 7 | 17.5 |
| Mild | 11 | 11 | 22 | 55 |
| Poor | 3 | 7 | 10 | 25 |

DISCUSSION: *Karna* is one among the *panchendriyas*, the disease *Karna Srava* is well known since ancient times. It is described by authors of *Brihatrayi* in detail. Chronic suppurative otitis media is fairly common infection affecting the mucosa of the middle ear cleft. The main complaint of the patient is deafness and, if there is active infection, intermittent discharge. In this study *Vachalashunadi taila* which is mentioned in *sahasrayogam* and *Nimbapatradi dhoopana* which is mentioned in *Bhavaprakash* is selected. *Vachalashunadi taila* contains drugs which are having *katu* and *tikta rasa*, *ruksha*, *laghu*, *tikshna* and *snigdha guna* and *ushna veerya* and mainly *kapha-vaata* hara properties, which are antagonistic to *Vata-kapha*, which are the main culprit of the disease. Most of the drugs in *Nimbadipatradi dhoopana* have predominance of *katu* and *tikta rasa*, *katu vipaka*, *laghu ruksha tikshna* and *snigdha guna* and *kaphavahara* properties. And some drugs have *madhura rasa* and *vipak*, *kaphapittahara* and *vatapittahara* properties. After the study In Group A *karnasrava* was relieved in 71.31% of patients. There was improvement in conductive deafness in 14.94% of patients and perforation was relieved in 14.94%. Improvement in Impaired hearing was seen in 26.67% of patients. *Karnasrava* was relieved in 60.91% of patients. In Group B there was improvement in Conductive deafness in 8.07%, and perforation was relieved in 12.91% of

patients. Improvement in Impaired hearing was seen in 18.16% patients. At the end of treatment, 1 patient showed good response in Group A and no patient's good response in Group B. 5 patients showed moderate response in group A and 2 patients in Group B. 11 patients showed mild response in both Group A and Group B, 3 patients showed poor response in Group A and 7 patients in Group B.

CONCLUSION: *Karnasrava* can be compared to chronic suppurative otitis media. Most common etiology of *karnasrava* is recurrent attacks of *pratishyaya* followed by exposure to *avashaya*. *Karnasrava* was found to be more prevalent in the lower strata of the society and labour class workers. Both the groups showed improvement in the treatment there was statistically significant difference between the group A and group B in ear discharge. In all other parameters there was no statistically significant difference. Both Groups were found to be effective only in the healing of pinhole perforations of tympanic membrane. Both Groups were found to be effective only in the relief of mild degree of conductive hearing loss and impaired hearing. There was no relief in patients with moderate and severe degree. No untoward effect was observed in any of the treatment groups

Recommendations for further study: Present study pattern can be contributed in the form of prospective clinical study with increased sample size. The effect of local procedures along with *Nasya* or *Nasya*

alone can be tried in *karna srava* in future research studies. The effect of local procedures along with administration of systemic oral medications which can boost the immunity which may give better results can be tried in *karna srava* in future research studies.

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Corresponding author:

Dr.Shashikala.D.K, Asst professor
P.G.Studies Dept of Shalakya Tantra
S.J.G. Ayurvedic Medical College Koppal,
Karnataka
Email: Dr.shashi17@gmail.com

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Declared