

CLINICAL STUDY OF EFFICACY OF AROGYAVARDHINI VATI IN KARNASRAVA W.S.R. TO OTORRHOEA

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ABSTRACT

Aim: To study the efficacy of *Arogyavardhinivati* on *Karnasrava* (discharge from ear), **Objective** -To establish correlation between *karnasrava* or *puyasrava* and *otorrhoea* (mucoid and musopurulent), To treat the *karnasrava* and prevent its recurrence, To find effective, cheap therapy to avoid recurrence and complications. **Materials and methods**-Total no. of 60 patients was taken in two different groups. Group A:-30 patients-Trial group (received *arogyavardhinivati* 500mg thrice a day with *sharkarayuktajala* (glucose water) Group B :- 30 patients -Control group (received Cap. Amoxycillin 500 mg thrice a day). **Observations and statistical analysis**- all the observations are recorded in tabular form. Paired t-test & unpaired t-test are used to compare both the groups. **Results**- drugs from both groups show significant results. *Karnasrava* is one of the *karnaroga* found commonly. *Arogyavardhinivati* is an Ayurvedic formulation, used in the treatment of *karnasrava*. During study, it was observed that, *karnasrava* has prevalence for males, Servicemen, lower class peoples. The drug is cost effective and safe. This drug is very much effective on *karnasrava* without any side effects.

Keyword: *Arogyavardhinivati*, *Karnasrava*, *otorrhoea*, Cap. Amoxycillin 500 mg

INTRODUCTION

Nowadays there is a lot of change in the lifestyle of people. People have different food habits and way of living. Cold food like ice-cream, cold drinks have an increasing demand. Consumption of such products will leads to vitiation of *doshas* (basic elements of body). Also due to increasing number of vehicles with their different types of sounds of horns leads to sound pollution which affects the ear. Thus due to different *apathyakar Aharvihar* (Following improper food habits) there will be development of different types of Ear diseases¹. Ear is considered one among the *Panchendriya* (Five sense organs). Main function of ear is perception of sound along with maintaining equilibrium of body. According to modern science

otorrhoea is the commonest diseases in most of the people now a day. *Karnasrava* can be resembled with *otorrhoea*. *Otorrhoea* is commonly found in children because of nasopharyngeal infections due to short and wide Eustachian tube in children, if not treated will lead to permanent hearing loss in children which will affect physical and mental health of the children. So it is necessary to treat properly. In modern practice it is treated with systemic as well as local Antibiotics, Analgesics and Anti-inflammatory drugs. But recurrence is very common. It will require surgical line of treatment i.e. tympanoplasty etc. This will again affect the economical status of the patient. So it needs cheap treatment². In *karnasrava* there is vitiation of *tridosha*. In

this *pitta* leads to melting of *kapha* which discharges out through the external auditory canal. *Vata* causes pain in this disease. So mainly *tridoshagna* (Balancing three body elements) treatment is required³. I found *Arogyavardhinivati* is very much

AIM

1. Clinical study to find out the efficacy of *Arogyavardhini vati* in *karnasrava*.

OBJECTIVES

1. To treat the *karnasrava* by *Arogyavardhini vati* and prevent its recurrence.
2. To find effective and cheap therapy to avoid recurrence and complications.

KARNASRAVA:

Shirobhighatataadhava Nimajjatojalo-prapakaadbhava pi vidrathe/ Sra-vettupuyamnilaavrut: sakarnasanshravaitiprakirtitaa: // Su.Utt.20th chap. Acharya Sushruta described 28 *karnarogas* (Ear diseases) in *Sushruta samhita*. Among these "*karnasrava*" (Otorrhoea) is one of the major serious disease which will be found common in most of the people. Due to different aetiological factors such as trauma to the head blood stained discharge, swimming, Due to supuration thick mucoid or mucopurulent discharge occurs i.e. known as *karnasrava*⁴.

Material

1. **Collection** – Drug *Arogyavardhini vati*⁵ taken from reputed S.G. Phytopharma, Kolhapur company and *Triphalakwath* from local Pune market
2. **Authentication & standardization** – It is done from S.G. Phyto pharma at Kolhapur & pune vidyapeeth, Pune.
3. **Contents of drug-** Parad-1 part, Gandhak-1 part, Tamrabhasma-1 part, Abhrakbhasma-1 part, Shilajit-3 parts, Triphala choorna-2 parts, Chitrakmula choorna-4 parts, Guggulu-4 parts, Katuki choorna-18 parts, Bhavana dravya-Nimbavrikshadalarasa-72 parts

Properties of *Arogyavardhinivati*⁶:

beneficial in *karnasrava* in my clinical experience. So due to most common problem and due to my clinical experience I have decided to study efficacy of *Arogyavardhini vati* in *karnasrava*.

Rasa: Tikta, Kashaya Pradhan, **Guna:** Laghu, Ruksha, Sara.,

Virya: Samshitoshna, **Vipak:** Katu, **Doshagnata:** Tridoshar

Karma: Kledahara, Krumighna, Stambhan, Puyahara.

By these quality *Arogyavardhini* can destruct pathology

Of Otorrhoea (*Karnasrava*).

Matra and Anupan (Dose and Vehicle): 500 mg thrice in a day with *sharkarayuktajala* (glucose water).

Pramarjan dravya- Triphalakwath (Haritaki-1 part, Bibhitaki- 1 part, Amalaki- 1 part)

Preparation of kwath⁷-

According to sharangdhar Samhita

Triphala choorna 1 part + 16 parts jala + reduced to 1/8 th part

Procedure - Dry sterile cotton swab applies to shalaka- deeped in triphalakwath- cleaned the ear canal.

Methodology:

Type of Study: Clinical prospective experimental comparative single blind study



- Entire study is based on clinical findings and patient's narration.

Source of Data: Department of Shalakyia OPD and IPD, Bharati Vidyapeeth Ayurved Hospital, Katraj, Pune - 411046.

Details of Study Subjects and Controls:

Number of patients selected - total 60 patients selected having signs and symptoms of otorrhoea.

Clinical study: The study of efficacy of *Arogyavardhini vati* on *karnasrava* is performed in *Ayurved* medical college and hospital Pune. Study is performed for the period of 2 years for this project the patients were divided randomly into two groups as experimental group and control group. Treatment is given to these patients. Pathyapathya explained, follow up taken and results are observed.

Inclusion Criteria:

1. The patients having signs and symptoms of *karnastrava* like,
2. Discharge through the ear
3. Itching in the ear
4. Pain in ear
5. Tenderness at the periphery of the ear
6. Irrespective of Age, Sex, Religion were selected for the project
7. Patients below 60 yrs of age.

Exclusion Criteria:

1. Recently ear operated patients
2. Patients above 60 yrs of age
3. Congenital anomalies of eye
4. Patients having Diabetes mellitus.
5. Pregnant women
6. Patients with Acute suppurative otitis media

Experimental group:

No of patients = 30

The patients were treated with *Arogyavardhinivati* 500mg thrice a day with *Sharkarayuktajala* (Sugar water). *Pramarjana* with *Triphala kwath*.

Control group:-



No of patients = 30

The patients were treated with cap Amoxycillin 500mg thrice a day⁸.

Aural toileting with dry cotton swab.

Duration of Trial: The patients in experimental group and control group were treated accordingly for 15 days.

Follow up of these patients will be taken on 1st, 3rd, 5th, 7th, 9th, 11th, 13th, 15th day. Observations taken into consideration and by narration on those days. And appropriate tests and investigations carried out.

Observation chart – Table no.1

| Symptoms | Day 1 | Day 3 | Day 5 | Day 7 | Day 9 | Day11 | Day13 | Day15 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Otorrhoea | | | | | | | | |
| Itching | | | | | | | | |
| Pain | | | | | | | | |
| Tenderness | | | | | | | | |

Table no. 2

| Type | Gradation | numbering |
|------------|-----------|-----------|
| Normal - | 0 | 0 |
| Mild - | + | 1 |
| Moderate - | ++ | 2 |
| Severe - | +++ | 3 |

OBSERVATIONS: Distribution of patient According to Age –

Table no.3

| Age | Trial | | Control | |
|-----|-----------------|------------|-----------------|------------|
| | No. Of Patients | Percentage | No. Of Patients | Percentage |
| | | | | |

| | | | | |
|--------------|-----------|-------------|-----------|-------------|
| 15-25 | 15 | 50% | 2 | 6.67% |
| 25-35 | 11 | 36.67% | 11 | 36.67% |
| 35-45 | 4 | 13.33% | 12 | 40% |
| 45-55 | 0 | 0% | 5 | 16.66% |
| Total | 30 | 100% | 30 | 100% |

In this study, patients are classified into age groups 15-25 years, 25-35 years, 35-45 years, and 45-55 years. It is seen that maximum no. of patients are affected in age groups 15-25 years in trial group, while maximum no. of patients are affected in age groups 25-35 years in control group.

Distribution of the patients according to Sex Table no.4

| Sex | Trial | | Control | |
|--------------|-----------------|-------------|-----------------|------------|
| | No. Of Patients | Percentage | No. Of Patients | Percentage |
| Male | 13 | 43.33% | Male | 13 |
| Female | 17 | 56.67% | Female | 17 |
| Total | 30 | 100% | Total | 30 |

In randomly selected cases, it is observed that 56.67% cases are female & 43.33% cases are male in trial group, while 50% cases are male & 50% cases are female in control group.

Distribution of patients according to occupation- Table no.5

| Sex | Trial | | Control | |
|--------------|-----------------|-------------|-----------------|-------------|
| | No. Of Patients | Percentage | No. Of Patients | Percentage |
| House Wife | 8 | 26.67% | 8 | 26.67% |
| Service | 9 | 30% | 15 | 50% |
| Student | 13 | 43.33% | 7 | 23.33% |
| Total | 30 | 100% | 30 | 100% |

In total number of cases 43.33% are students, 30% are servicemen & 26.67% are housewife in trial group while in control group 50% are servicemen, 26.67% are housewife & 23.33% are students.

Distribution of patients according to symptom 'srava (Otorrhea)'- Table no.6

| Otorrhoea | Trial Group | | | | Control Group | | | |
|-----------|-------------|------|------------|----|---------------|-------|------------|-------|
| | B. T. 1 | % | A. T. 1 | % | B. T. 2 | % | A. T. 2 | % |
| | No. Of Pt. | | No. Of Pt. | | No. Of Pt. | | No. Of Pt. | |
| 0 | 0 | 0 | 24 | 80 | 0 | 0 | 6 | 20 |
| 1 | 0 | 0 | 6 | 20 | 0 | 0 | 17 | 56.66 |
| 2 | 10 | 33.3 | 0 | 0 | 2 | 6.66 | 7 | 23.33 |
| 3 | 20 | 66.6 | 0 | 0 | 28 | 93.33 | 0 | 0 |

In cases of trial group, 80% of patients otorrhoea is cured totally & it is reduced in 20% of cases and among the control group, 20% patients cured, whereas 56.66% patients having reduced otorrhoea.

Distribution of patients according to symptom 'kandu' (Itching)- Table no.7

| | Trial Group | | | | Control Group | | | |
|--|-------------|---|------------|---|---------------|---|------------|---|
| | B. T.1 | % | A. T.1 | % | B. T.2 | % | A. T.2 | % |
| | No. of Pt. | | No. of Pt. | | No. of Pt. | | No. of Pt. | |
| | | | | | | | | |

| | | | | | | | | |
|---|----|----|----|-------|----|-------|----|-------|
| 0 | 0 | 0 | 26 | 86.66 | 5 | 16.66 | 20 | 66.66 |
| 1 | 3 | 10 | 3 | 10 | 3 | 10 | 9 | 30 |
| 2 | 21 | 70 | 0 | 0 | 12 | 40 | 1 | 3.33 |
| 3 | 6 | 20 | 0 | 0 | 10 | 33.33 | 0 | 0 |

In the trial group 86.66% of cases itching is cured & among control group 66.66 % of cases gets cured.

Distribution of patients according to symptom 'karnashula'(Pain)-Table no.8

| Gradation | Trial Group | | | | Control Group | | | |
|-----------|-------------|-------|------------|-------|---------------|-------|------------|-------|
| | B. T.1 | % | A. T.1 | % | B. T.2 | % | A. T.2 | % |
| | No. of Pt. | | No. of Pt. | | No. of Pt. | | No. of Pt. | |
| 0 | 0 | 0 | 28 | 93.33 | 6 | 20 | 22 | 73.33 |
| 1 | 20 | 66.66 | 2 | 6.66 | 10 | 33.33 | 7 | 23.33 |
| 2 | 10 | 33.33 | 0 | 0 | 10 | 33.33 | 1 | 3.33 |
| 3 | 0 | 0 | 0 | 0 | 4 | 13.33 | 0 | 0 |

In studied cases pain gets reduced in 93.33% cases in trial group, while 73.33% cases gets relieved from pain in control group.

Distribution of patients according to symptom 'asparshasahatva' (Tenderness)-Table no.9

| Gradation | Trial Group | | | | Control Group | | | |
|-----------|-------------|-------|------------|-------|---------------|-------|------------|-------|
| | B. T.1 | % | A. T.1 | % | B. T.2 | % | A. T.2 | % |
| | No. of Pt. | | No. of Pt. | | No. of Pt. | | No. of Pt. | |
| 0 | 22 | 73.33 | 28 | 93.33 | 9 | 30 | 25 | 83.33 |
| 1 | 8 | 26.66 | 2 | 6.66 | 12 | 40 | 5 | 16.66 |
| 2 | 0 | 0 | 0 | 0 | 7 | 23.33 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 2 | 6.66 | 0 | 0 |

In studied cases 73.33% patients in trial group, while 83.33% patients in control group get relieved from tenderness.

BEFORE TREATMENT

AFTER TREATMENT



Statistical analysis - The present scientific study was undertaken to study the efficacy of *Arogyavardhinivati* on *karnasrava*. Then *arogyavardhinivatigiven* to the patients in experimental group and Tab. Amoxycillin given to the patients in con-

trol group. The observations according to parameters were noted before treatment and after treatment. Each sign is statistically analyzed individually. Sample was small in size. Students paired t-test and unpaired t-test were applied for the deter-

mination of significance of treatment as per need.

DISCUSSION

After study it is observed that the patients having the fond of ice-creams, cold drinks & who exposed to pollution are prone to this disease. Mucoïd or mucopurulent discharge are more commonly seen in Otorrhoea. Study also showed that *karnasrava* was more common in age group 25 to 35, more common in females than males. *Arogyavardhinivati* does the *shoshan* (Absorption) of different excess discharge present in the ear i.e. *rasadhātu* it does the *pachan* of *drava* and *kled* and does the *raktavardhan*. It reduces *dravatva*, *snigdhatva* in *medadhātu*. According to *panchmahabhoutikata karnasrava* having *prithvi* and *jala mahabhuta pradhan*, while *arogyavardhini vati* has *akash*, *vayu*, and *teja mahabhuta pradhanata*. Due to these mahabhuta pradhanata it will helpful to reduce the *karnasrava*. In other symptoms that is *kandu*, *karnashula*, and *asparshasahatwa* are also reduced significantly in both the groups. It seems that number of cured patients in trial group are more than in control group, so the results are encouraging. Collectively this seems that *arogyavardhini vati* is effective on *karnasrava*.

CONCLUSION

Arogyavardhini better acts on different symptoms of *karnasrava* like *srava*, *kandu*, *shula* and *asparshasahatva*. People who exposed to air pollution & having cold food habits are maximum prone to this disease. Symptoms & signs of *karnasrava* can be correlated with otorrhoea (mucoïd or mucopurulent discharge). This *vati* (Tablet) used for longer duration may prove more effective in *karnasrava*. This *vati* is easily available & cheap conservative line of treatment for *karnasrava*.

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