

# To Study the Efficacy of Nirgundipatra Swaras Taila Karnapurana in the Management of Pootikarna with Special Reference to Chronic Suppurative Otitis Media

Dr. Santosh Kumar Sahu

Assistant Professor, Department of Shalaky Tantra, Mandsaur Institute of Ayurved Education & Research, Bhunyakhedhi, Madhya Pradesh, India

## ABSTRACT

Pooti Karna is a Chronic Disease caused by vitiated Kapha and Pitta dosha with its characteristic features of profuse thick Pooti (foul odor), puya (pus) discharge from the ear with or without pain. In Ayurvedic literature the karna is the seat of shraavanendriya, the functional aspect of hearing. Karna are two in number as pointed by the word. karnou. used in plural form. They are related with sabdavahastrotas and nadis. According to Sushruta, the srotas are of two types, one in antahmukha or introverted and other is bahirmukha or extrverted. Karna is the one among the bahirmukhab srotas. Pootikarna is a disease mentioned by Acharya Sushruta in the chapter of karnarogavigyaniya. Acharya Sushruta has counted Pootikarna as a disease entity under 28 karnarogas. due to vitiation of different dosha Pootikarna is one among the 28 diseases of the karna rogas mentioned in our classics. The term Pootikarna is self-explanatory which means discharge from the ear. Classical feature of Pootikarna is puyasrava which refers to foul smelling discharge with pain or without pain which can be considered as mucopurulent and purulent discharge can be compared to chronic suppurative otitis media.

**KEY WORDS:** *Sushrutha Samhita, Pootikarna, Nirgundipatra Swaras Taila, and Chronic Suppurative Otitis Media*

## INTRODUCTION:

In Ayurvedic literature the karna is the seat of shraavanendriya, the functional aspect of hearing. Karna are two in number as pointed by the word. karnou used in plural form. They are related with sabdavaha srotas and nadis<sup>1</sup>. According to Sushruta, the srotas are of two types, one in antahmukha or introverted and other is bahirmukha or extrverted. Karna is the one among the bahirmukha srotas.<sup>2,3</sup>

Twenty eight Karna Roga and five Karnpali Gata Roga are available in classical literature of Ayurveda where Karna Srava is described by all ancient scholars of Ayurveda. Pūti Karna is a Chronic Disease caused by vitiated Kapha and Pitta dosha with its characteristic features of profuse thick pooti (foul odor), puya (pus) discharge from the ear with or without pain.<sup>4</sup> Pootikarna signifies discharge from ear but with advancement of medical science and improved hygienic status of society, ear discharge

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from the external ear is not very common but ear discharge from middle ear cavity is till date a common ENT problem. Pootikarna is one among the 28 diseases of the karnarogas mentioned in our classics. The term Pootikarna is self-explanatory which means discharge from the ear. Classical feature of Pootikarna is puyasrava which refers to foul smelling discharge with pain or without pain which can be considered as muco purulent and purulent discharge can be compared to chronic suppurative otitis media. Chronic suppurative otitis media is long-standing infection of a part or whole of the middle ear cleft and its mucoperiosteal lining resulting in discharge in ear, deafness, and perforation of tympanic membrane. Chronic otitis media is a sequel of acute otitis media Incidence of chronic suppurative otitis media is higher in developing countries and in children. It affects both the sexes and all age groups.

In India, the overall prevalence rate is 46 and 16 subjects per thousand in rural and urban population respectively. It is the single most important cause of hearing impairment in rural population.

Aural toilet, ear drops, systemic antibiotics, precautions, surgical management have been the choice of treatment for chronic suppurative otitis media. But the ear drops are likely to cause maceration of the canal skin, local allergy, and growth of fungus or resistance of organism. Some ear drops are even potentially ototoxic. Complications of surgery include bleeding, damage to the inner ear if stapes is accidentally removed, injury to facial nerve, damage to sigmoid sinus if the mastoid is also exposed, meninges may be damaged and failure of graft may occur.

In spite of above medical management, this disease persists lifelong and hampers an individual's quality of life to a great extent; non responsiveness is mainly because of drug tolerance, adverse effects of drugs, persistent infection in throat, nose, sinuses further aggravate the problem from time to time. Therefore an eminent necessity is felt for obtaining better solution for management of Pootikarna from Ayurvedic perspective. In the present study, Nirgundi patra swarasa taila karnapooran is taken up for the study. As drugs used in these therapies are easily available, easily administered with minimal or no known complications and easily acceptable by the patients.

### Aim and Objectives

- To study the role of Nirgundipatra Swarasa Taila karnapooran in the management of Pootikarna.
- To study the Pootikarna and Chronic Suppurative Otitis Media according to ayurveda and modern science.
- To evaluate the efficacy of Nirgundipatra swarasa taila karnapoorana in the management of Pootikarna.
- To compare the efficacies of Nirgundipatra swarasa taila and Otobiotic ear drop in the management of Pootikarna.

### Study design

60 patients of Pootikarna is fulfill the criteria for inclusion will be selected patients will be advised for Nirgundipatra Swarasa Taila Karnapoorana for a period of 15 days. The 60 patients divided in 2 group i.e. group A and group B-

Group A:- 30 Patient- Trial group (Received NirgundipatraSwarasTaila)

Group B:- 30 Patient- Control group (Received Otobiotic Ear drop)

**Follow up-** Follow up of these patients will be taken on 1st,5th,10th,15th, day.

### Material and Method

#### Selection of patients

Patients will be selected from OPD & IPD and special camps conducted by Mandsaur Institute of Ayurved Education & Research. The patients were selected irrespective of religion, caste, and gender, in the age group of 5-60 years.

#### Diagnosis Criteria

Diagnosis will be established on the basis of subjective symptoms of Pootikarna are-

- Puyasrava
- Karnasula
- Karnabadhrya
- Karnakandu

#### Inclusion Criteria

1. Patients presenting with features of Benign or TuboTympanic Chronic Suppurative Otitis Media without complications.
2. Chronic Suppurative Otitis Media. (Greater than 2 week )
3. Patients in the age group of 5 to 60 years.
4. Patients with mucoid, mucopurulent or purulent ear discharge of foetid odour.

#### Exclusion Criteria

1. Patients aged below 5years and above 60 years.
2. Acute Suppurative Otitis Media.(1st 2 week )
3. Patients with severe conductive deafness, mixed deafness are excluded.
4. Ear discharge associated with complications.
5. Patients with other systemic diseases.
6. Dangerous or Atticoantral chronic suppurative otitis media.

### Drug

Nirgundipatra Swarasa Taila

For prepration of nirgundiswarasataila drugs should be taken the drugs are:-

- Fresh juice of (leaves of) nirgundi,
- Taila,
- Saindhav,
- Powder of dhuma,
- Guda

And added with honey, filled in to the ear relieves pootikarna.

### Method of study

All the patients selected for trial were explained the nature of the nature of the study and their consent was obtained on the proforma before inclusion in the study.

**Methods of collection of data :**

- 60 patients who are fulfilling the criteria for diagnosis & inclusion will be selected for study.
- Excluded those patients who didn't agree to the terms and conditions of a research study.
- The patients were selected irrespective of religion, caste, and gender.

**Clinical assessment**

The sign and symptoms were assessed by adopting a suitable scoring method. The detailed are as follows:

**Puyasrva**

- 0 No pus discharge
- 1 mild pus discharge
- 2 moderate pus discharge
- 3 severe pus discharge

**Karnasrava:**

- 0 No discharge
- 1 Scanty-discharge without visible can seen during fungal mass removing
- 2 Moderate –feeling of discharge in side ear needs mopping
- 3 Profuse –itself comes outside

**Karnabandhirya**

- 0 No hearing loss
- 1 Mild
- 2 Moderate
- 3 Severe

**Karnakadnu**

- 0 No itching
- 1 Occasionally
- 2 Mild (2-3 times/day)
- 3 Moderate(> 3 times and < 10 times)
- 4 Severe(continuous whole day)

The data thus obtained after treatment was statistically analyzed and the 't' value and 'P' value were presented and logically interpreted after discussion, and conclusions were drawn.

**Result**

**Table no: 1 Cardinal symptoms of Pootikarna Group A treated with Nirgundipatra swaras taila.**

Sr	Symptoms	Mean		Diffrrnce	%	Sd	Se	'T'	'P' Value
		Bt	At						
1.	Puyasrava	2.83	1.1	1.73	61.13%	1.2232	0.3162	3.86	<0.001
2.	Karnasrava	2.5	1.1	1.4	56%	0.9899	0.2559	3.86	<0.001
3.	Karnabandhirya	2.6	0.8	1.8	69.23%	1.2727	0.2326	3.86	<0.001
4.	Karnakandu	2.76	1.03	1.73	66.53%	1.2232	0.3162	3.86	<0.001

**PUYASRAVA-** Here in this present study we got before treatment mean for present symptom is 2.86 which was reduced up to 1.1 and the mean difference for this was came 1.73 the percentage of cure was 61.13% and the standard deviation for these symptoms was came 1.2232 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**Observations**

In this study, 60 patients of Pootikarna were registered and randomly allocated under two groups viz. Nirgundipatra Swarasa Taila Karnapoorana (Group A) and Otobiotic Ear drop (Group B). The details of vital data, personal history, Dasha Vidha Pariksha findings, and disease-related findings are being described in detail under each heading. The age limit of the patient in the study was 30 patients of Pootikarna shows that 50% patients were between the age group 16 – 30 years and 50% patients were between age group 31-50 years. Sex wise distribution of Pootikarna in both groups 36.66% patients were Male and 63.33% were Female. The socio economic status wise distribution of patient. In the present study of Pootikarna upper having 33.33%, Middle 38.33% and lower 28.33% of Pootikarna. The habit wise distribution of patients. 50% of rural and 50% of urban. The dietic habit wise distribution of patients. mix having 66.66% and veg having 33.33%. The nidra wise distribution of patients. In nidra wise distribution of patients heena having 75% and madhyam having 25% of Pootikarna. The satva wise distribution of patient. In satva wise distribution of patients Madhyam having 43.33% and uttam having 56.66% of Pootikarna. The satmya wise distribution of patients. satmya wise distribution of patients madhyam having 46.66% and uttam having 53.34% of Pootikarna. The vyayam wise distribution of patients: In vyayam wise distribution of patient smadhaym having 38.33% and uttam having 61.66% of Pootikarna. The prakruti wise distribution of patients: In prakruti wise distribution of patients vk having 60% and pk having 40% of Pootikarna. The digestion wise distribution of patients: In digestion wise distribution of patients regular having 53.33% and Irregular having 46.33% of Pootikarna. the working history wise distribution of patients. In working history wise distribution of patients business having 31.33% ,labour having 20% and teacher having 48.33% of Pootikarna.

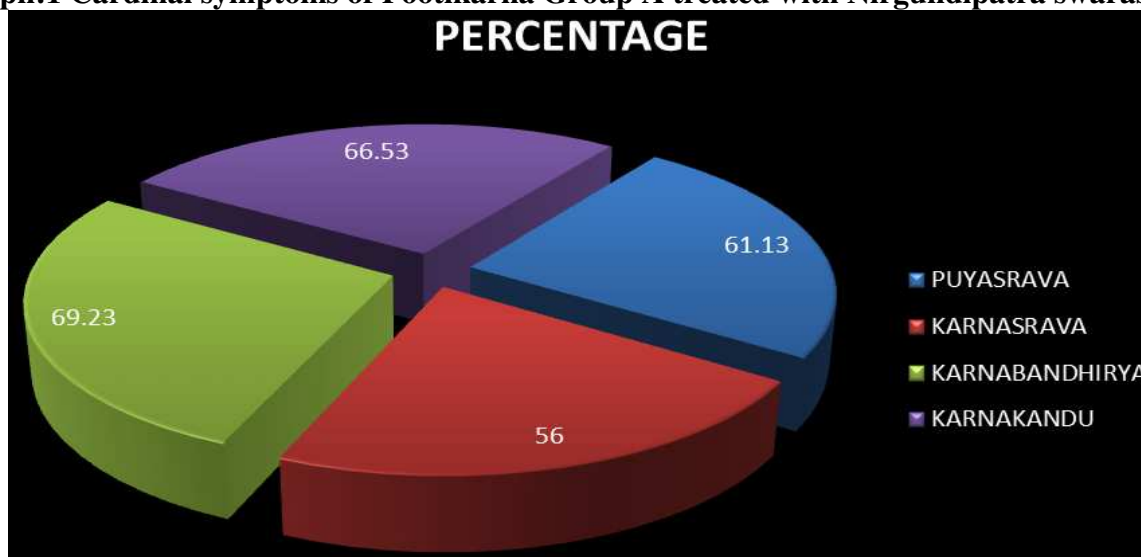


**KARNASRAVA** - Here in this present study we got before treatment mean for present symptom is 2.5 which was reduced up to 0.86 and the mean difference for this was came 1.4the percentage of cure was 56% and the standard deviation for these symptoms was came 0.9899 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**KARNABANDHIRYA** Here in this present study we got before treatment mean for present symptom is 2.6 which was reduced up to 0.8 and the mean difference for this was came 1.8the percentage of cure was 69.23% and the standard deviation for these symptoms was came 1.2727 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**KARNAKANDU** - Here in this present study we got before treatment mean for present symptom is 2.76 which was reduced up to 1.03 and the mean difference for this was came 1.73the percentage of cure was 66.53% and the standard deviation for these symptoms was came 1.2232 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**Graph:1 Cardinal symptoms of Pootikarna Group A treated with Nirgundipatra swaras taila**



**Table No: 2 Cardinal symptoms of Pootikarna Group A treated with Otobiotic ear drop.**

Sr	Symptoms	Mean		Diffrrnce	%	Sd	Se	'T'	'P' Value
		Bt	At						
1.	Puyasrava	2.83	0.7	2.13	75.26%	1.5061	0.3893	3.86	<0.001
2.	Karnasrava	2.56	0.7	1.86	72.65%	1.3152	0.3400	3.86	<0.001
3.	Karnabadhiryra	2.63	1.23	1.4	53.23%	0.9899	0.2559	3.86	<0.001
4.	Karnakandu	2.7	1.13	1.57	58.14%	1.1101	0.2870	3.86	<0.001

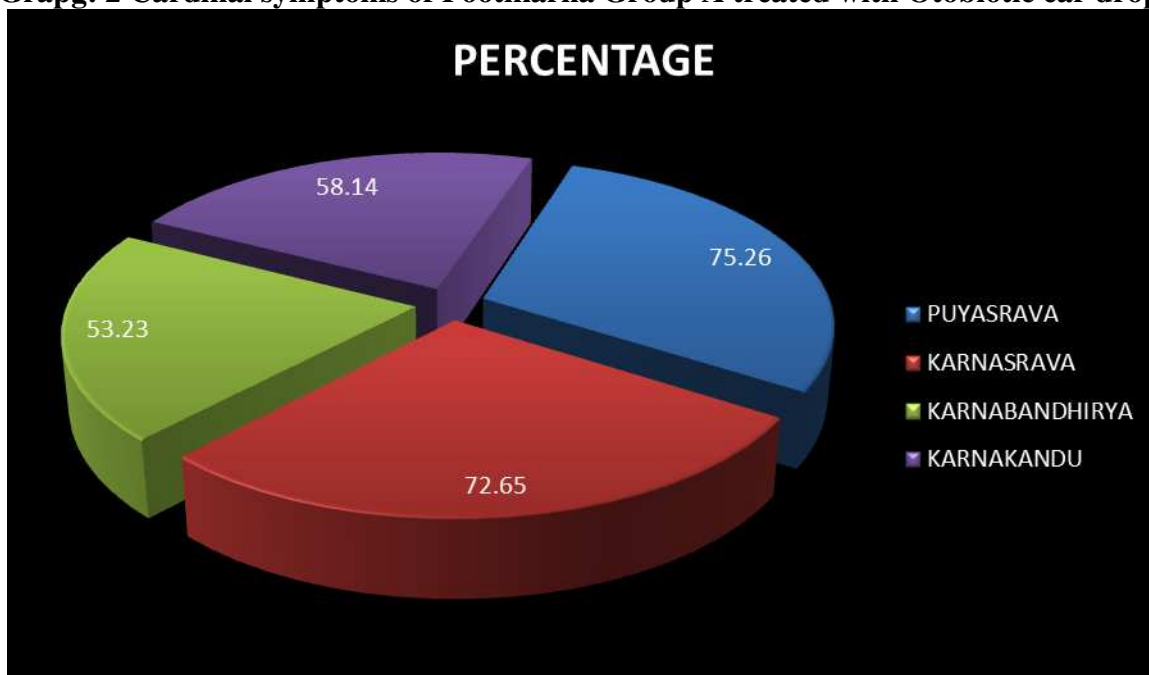
**PUYASRAVA** - Here in this present study we got before treatment mean for present symptom is 2.83 which was reduced up to 0.7 and the mean difference for this was came 2.13 the percentage of cure was 75.26% and the standard deviation for these symptoms was came 1.5061 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**KARNASRAVA** - Here in this present study we got before treatment mean for present symptom is 2.56 which was reduced up to 0.7 and the mean difference for this was came 1.86the percentage of cure was 72.65% and the standard deviation for these symptoms was came 1.3152 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**KARNABANDHIRYA** - Here in this present study we got before treatment mean for present symptom is 2.63 which was reduced up to 1.23 and the mean difference for this was came 1.4the percentage of cure was 53.23% and the standard deviation for these symptoms was came 0.9899 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**KARNAKANDU** - Here in this present study we got before treatment mean for present symptom is 2.7 which was reduced up to 1.13 and the mean difference for this was came 1.57the percentage of cure was 58.14% and the standard deviation for these symptoms was came 1.1101 and student unpaired 't' test was calculated 3.86 and 'p' value is highly significant at level <0.001

**Grapp: 2 Cardinal symptoms of Pootikarna Group A treated with Otobiotic ear drop.**



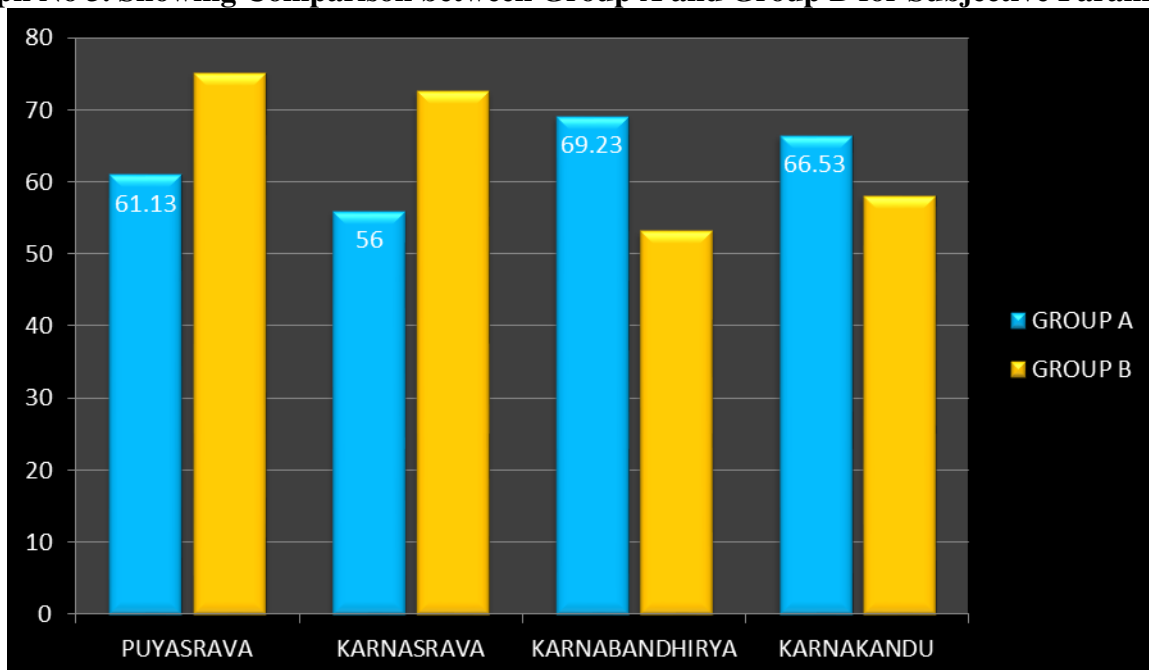
**Comparison between Group A and Group B:**

**Table No 3. Showing Comparison between GroupA and Group B**

Symptoms	Percentile Change In Group A	Percentile Change In Group B
Puyasrava	61.13%	75.26%
Karnasrava	56%	72.65%
Karnabandhirya	69.23%	53.23%
Karnakandu	66.53%	58.14%

- PUYASRAVA:** GroupA shows 61.13 percentile improvement in Puyasrava while in a group B it shows 75.26 percentile improvement.
- KARNASRAVA:** GroupA shows 56 percentile improvement in Karnasrava while in a group B it shows 72.65 percentile improvement.
- KARNABANDHIRYA:** GroupA shows 69.23 percentile improvement in Karnabandhirya while in a group B it shows 53.23 percentile improvement.
- KARNAKANDU:** GroupA shows 66.53 percentile improvement in Karnakandu while in a group B it shows 58.14 percentile improvement.

**Graph No 3. Showing Comparison between Group A and Group B for Subjective Parameters:**



## Discussion

Here in this Study we are gone through the detail description about the introduction of present work. The percentage of the prevalence of disease. The incidence rate of the disease chronic suppurative otitis media is a long standing infection of a part or whole of the middle ear cleft characterized by ear discharge and a permanent when its edges are covered by squamous epithelium and its does not heal spontaneously, permanent perforation can be likened to an epithelium lined fistulous track. Aural toilet, ear drops, systemic antibiotics, precautions, surgical management have been the choice of treatment for Chronic Suppurative Otitis Media. but the ear drop are likely to cause maceration of the canal skin, local allergy, and growth of fungus or resistance of organism. Some ear drops are even potentially ototoxic. Complications of surgery include bleeding, damage to the ear if stapes is accidentally removed, injury to facial nerve, damage to sigmoid sinus if the mastoid is also exposed, meninges may be damage and failure of graft may occur.

Therefor an eminent necessity is felt for obtaining better solution for management of pootikarna from ayurvedic perspective. In the present study, Nirgundi patra swaras taila karnapurana is taken up for the study. As drugs used these therapies are easily available, easily administered with minimal or no known complication and easily acceptable by the patients.

## Conclusion

Pootikarna is a disease of Karna, it is a Pittaja Prominent vyadhi presenting with Karnasrava, Puyasrava, Karnabadhira and Karnakandu. The striking causes of pootikarna are exposure to polluted Water, exposure to dust, excessive consumption of pitta vardhaka ahar and vihar, etc. Based on symptoms pootikarna is correlated with Chronic

Suppurative otitis media. Group A (Nirgundi patra swaras tail in Pootikarna) and Group B (Clotrimazole ear drop in Chronic suppurative otitis media) showed significant relief in signs and symptoms of Pootikarna. This validates the efficacy of Nirundipatra swaras tail as an important modality of treatment in Pootikarna. Group A showed equal efficacy in reducing signs and symptoms of Pootikarna namely Karnasrava, Puyasrava, Karnabadhira and Karnakandu. with Group B. After an assessment, it can be concluded that, even though nirgundi patra swaras tail had a satisfactory effect on Karnabadhira and karnakandu, but in all other Parameters it had equal results in a given period. Overall, it may be concluded that Group A has shown results and improvement equivalent to Group B in the management of Pootikarna. Hence, it may be recommended that Ayurveda physicians may safely and confidently practice nirgundi patra swaras tail in Pootikarna.

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