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Efficacy of *Arogyavardhini vati* with *prakshalan* of *kshirivriksha* in management of *karnasrava*

Research Article

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Abstract

Background: Now a days there is a lot of change in the life styles of peoples. 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 Ahar Vihar* there is development of different types of *Karnarogas*. *Karnasrava* is alone among commonly found *Karna Rogas* now a days, resembles with otorrhoea, acute otitis externa and chronic otitis media. These diseases lead to permanent hearing loss, so it is necessary to treat properly. In modern practice these diseases are treated by systemic as well as local Antibiotics, Analgesics and Anti-inflammatory drugs. This affects the economical status of the patient. So it needs cheap treatment. **Aim:** Efficacy of *Arogyavardhini Vati* with *Prakshalan* of *Kshirivriksha* in management of *Karnasrava*. **Conclusion:** *Karnasrava* was found to be more prevalent in the lower strata of the society and labor class workers. The classical textual benefits of *Arogyavardhini Vati* with *Panchkshiri Kwatha Prakshalan* were adopted. This *Vati* is easily available & cheap conservative line of treatment for *Karnasrava*. This *Vati* used for longer duration may prove more effective in *Karnasrava*.

Key words: *Karnasrava,* Otorrhoea*, Arogyavardhini vati, Kshiri vriksha,*

Introduction:

Karna is considered as one of the 9 *Dwaras* and is considered as one among the *Panchendriyas*. (1) It is known as *Shrotrendriya*. Main function of ear is the perception of Sound. Along with function of hearing, it maintains the equilibrium of body.

Now a day there is a lot of change in the life styles of peoples. Very cold foods like ice-cream, cold drinks have an increasing demand. Consumption of such products will leads to vitiation of *Doshas*. 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 Ahar Vihar* there will be development of different types of *Karnarogas*.(2)

Karnasrava is one among the 28 *Karnarogas* described by *Acharya Sushruta*.(3) *Vagbhata* has not mentioned *Karnasrava* as a separate disease but has explained about *Karnasrava Chikitsa*.

According to modern science otorrhoea, acute otitis externa and chronic otitis media are the commonly available

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diseases in most of the peoples now days. A clinical feature of *Karnasrava* resembles with otorrhoea, acute otitis externa and chronic otitis media. These diseases lead to permanent hearing loss, so it is necessary to treat properly. In modern practice these diseases are treated by systemic as well as local Antibiotics, Analgesics and Anti-inflammatory drugs. But recurrences are very common. Long term antibiotics, while they decrease rates of infection during treatment, have an unknown effect on long term outcomes such as hearing loss. (4) It require surgical line of treatment i.e. Tympanoplasty etc. This again affects the economical status of the patient. So it needs cheap treatment.

Hence an effective treatment approach, which is simple and economical, needs a serious consideration. In *Karnasrava* there is vitiation of *Tridosha.* In this *Pitta* leads to melting of *Kapha* which discharges out through the external auditory canal. *Vata* associates with pain in this disease so mainly *Tridoshaghna* treatment is required.

Arogyavardhini Vati has different ingredients which reduce the *Karnasrava*. This drug is easily available and also cost of it is very less. So the persons who are living in low socioeconomic family they can also be prevented from this disease. According to *Rasaratna Samucchaya* mentioned that *Arogyavardhini Vati* has *Sarvaroga Prashamani.*(5) *Kshiri Vriksha* having *Kashaya Rasa (Udumbara* having *Madhura* as *Anurasa), Shita Virya* do *Kapha Pitta Shamana* and *Karma* like *Shothahara, Vedanasthapana, Vranashodhana* and *Vranaropaka.* (6) Prakshalan with Kshirivriksha Kashaya is described by Acharya Sushruta in *Karnaroga Pratishedha*. (7)

Aims:

Efficacy of *Arogyavardhini Vati* with *Prakshalan* of *Kshirivriksha* in management of *Karnasrava*.

Methodology:

Study design:

Clinical prospective experimental comparative single blind study - Entire study is based on clinical findings and patient's narration. Total 60 patients were selected, and divided randomly into two groups as experimental group and control group.

Experimental group:

The patients were treated with *Arogyavardhini Vati* 500mg thrice a day with *Sharkarayukta Jala* and *Pramarjana* with *Panchkshiri Kwatha*.

Control group:

The patients were treated with cap Amoxicillin 500mg thrice a day and aural toilet with dry cotton swab.

Selection of drug:

Arogyavardhini Vati Purchased from market of a good brand Divya Pharmacy.

Contents of *Arogyavardhini Vati* (8)

- *Parad*-1 part
- *Gandhak*-1 part
- *Tamra bhasma*-1 part
- *Abhrak bhasma*-1 part
- *Shilajit*-3 parts
- *Triphala churna*-2 parts
- *Chitrakmula churna-4 parts*
- *Guggulu*-4 parts
- *Katuki churna*-18 parts
- *Bhavana dravya-Nimba vrikshadalarasa*-72 parts

***Kshirivriksha*:** (6) (9)

1. *Vata - Ficus bengalensis Linn.*
2. *Asvatha - Ficus religiosa Linn.*
3. *Udumber - Ficus racemosa Linn.*
4. *Plaksha - Ficus lacor Linn.*
5. *Parisha - Thesposia populnea (Linn) soland*

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Preperation of *Kshirivruksha kwatha*:

Kshirivriksha churna 1 part + 16 parts *Jala* + reduced to 1/8th part (10)

Procedure:

Dry sterile cotton swab-apply to *Shalaka*- dipped in *Triphala Kwatha*- cleaned the ear canal.

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 was selected for the project.
7. Patients in age group of 5-60 yrs.

Exclusion Criteria:

1. Patients with recent ear operation.
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

Follow ups:

Follow up of these patients was taken on 1st, 3rd , 5th , 7th , 9th , 11th, 13th, 15th day.

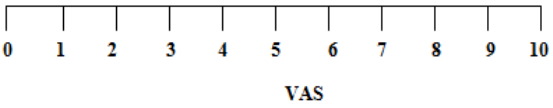
Parameter:

1. Ear discharge:

Grade 0 Normal
Grade 1 Mild – scanty secretion near tympanic membrane
Grade 2 Moderate – secretions irrigating in the ear canal
Grade 3 Severe – secretion coming out of ear canal.

Kandu, Shula and tenderness are measured by visual analogue score (VAS).

Figure 1: Visual Analogue Scale (VAS)



2. ***Kandu* (Itching)**

Grade 0	- Normal	(0-1)
Grade 1	- Mild	(2-4)
Grade 2	- Moderate	(5-7)
Grade 3	- Severe	(8-10)

3.* Pain *(Karnashula)

Grade 0	- Normal	(0-1)
Grade 1	- Mild	(2-4)
Grade 2	- Moderate	(5-7)
Grade 3	- Severe	(8-10)

4. Tenderness:

Grade 0	- Normal	(0-1)
Grade 1	- Mild	(2-4)
Grade 2	- Moderate	(5-7)
Grade 3	- Severe	(8-10)

Criteria for assessment of overall responses

Based on the changes in the signs and symptoms the cure rate was classified into

Good response - Above 76 % relief in overall features.
Moderate response - 51%- 75% relief in overall features.
Mild response - 26%- 50% relief in overall features
No relief - Below 25% relief in overall features.

Observation:

Data analysis consisted of two parts, first part to describe the characteristic of the study subjects by using descriptive methods viz. general points like age, sex, *prakruti* etc. second part consisted of comparisons of pre treatment measurements of the outcome with that of post treatment measurements where we used inferential methods and statistics. Statistical analysis was done for the results using student t – test at 5% level of significance.

Distribution of patient According to Age:

Table 1: Distribution according to Age

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%

Distribution of the patients according to Sex

Table 2: Distribution according to Sex

Sex	Trial		Control	
	No. of Patients	Percentage	No. of Patients	Percentage
Male	13	43.33%	15	50%
Female	17	56.67%	15	50%
Total	30	100%	30	100%

Distribution according to *Prakruti* of Patients:

Table 3: Distribution according to *Prakruti*

Prakruti	Trial		Control	
	No. of Patients	Percentage	No. of Patients	Percentage
Vata-Kapha	16	53.33	14	46.67
Pitta-Kapha	05	16.67	6	20
Vata-Pitta	09	30.00	10	33.33
Total	30	100%	30	100%

Distribution according to laterality

Table 4: Distribution according to Laterality

laterality	Trial		Control	
	No. of Patients	Percentage	No. of Patients	Percentage
Unilateral	19	63.34 %	17	56.67%
Bilateral	11	36.63 %	13	43.33%
Total	30	100%	30	100%

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Statistically analysis on result of *Srava*

Table 5: Statistically analysis on result of *Srava*

Group	Mean		SD	% of relief	t cal	t table	P value
Trial	BT	2.67	0.85	81.27%	15.71	2.45	< 0.0001
	AT	0.5					
Control	BT	2.93	0.78	76.01%	13.32	2.45	< 0.0001
	AT	0.7					

Table no 5 shows the effect on *Srava*, Both control and trial group has shown statistically significant result ($p<0.05$).

Statistically analysis on result of *Kandu*

Table 6: Statistically analysis on result of *Kandu*

Group	Mean		SD	%	t cal	t table	P value
Trial	BT	2.83	0.65	75.26	16.35	2.45	< 0.0001
	AT	0.7					
Control	BT	2.43	0.92	71.19	9.05	2.45	< 0.0001
	AT	0.7					

For *Kandu* both Trial and control group has shown statistically significant results, p value is < 0.05 for both groups.

Statistically analysis on result of *Karnashula*

Table 7: Statistically analysis on result of Shula

Group	Mean		SD	%	t cal	t table	P value
Trial	BT	2.86	0.60	66.89	12.35	2.45	< 0.0001
	AT	0.9					
Control	BT	2.54	0.77	72.44	7.79	2.45	< 0.0001
	AT	0.7					

Above statistically analysis on *Karnashula* shows both groups are statistically significant.

Statistically analysis on result of *Sparsha Asahishnuta* (Tenderness)

Table 8: Statistically analysis on result of *Sparsha Asahishnuta*

Group	Mean		SD	%	t cal	t table	P value
Trial	BT	2.90	0.55	61.37	12.43	2.45	< 0.0001
	AT	1.12					
Control	BT	2.69	0.71	77.69	6.85	2.45	< 0.0001
	AT	0.6					

Result of control group shows more relief. Both groups are statistically significant.

Discussion:

***Karnasrava*:**

Karna is one of the most important *Gyanendriya* in body. Its important function is hearing. It is also important organ in maintaining balance of body.

Samanya nidan*:*

Avashyaya (excessive expose to cold), *Jala Krida* (Excessive swimming), *Karna kanduryanam* (Scratching), *Shabda mithyayoga, Abhighata, Vitiatian* of *Tridosha*. (2) After study it is observed that the patients having the habits of ice-creams, cold drinks & who exposed to pollution are more prone to this disease.

Samprapti:

Due to etiological factors the vitiated *Doshas* gets *Sthansamshraya* in *Karna* and cause *Karnasrava*.

Sampraprti ghatak:

Dosha	Predominently *Vata*
Dushya	*Rasa, Rakta, Mamsa*
Srotas	*Shabdavaha*
Srotidusti	*Sanga, Vimarga gaman, Atipravruti*
Adhisthan	*Karna*

Rupa:

The *Lakshanas* of *Karnasrava* can be correlated with otorrhoea (mucoid or mucopurulent). Only *Puyasrava* is mentioned as symptoms but here *Puyasrava* refers to different nature of discharge like *Jalasrava, Rasasrava* which can be considered as watery, mucopurulent and purulent discharge.

Sadhya-asadhyata:

Sadhyata gives the clear picture of prognosis of the disease. It depends on many factors like nature of disease, severity of disease, *Vaya, Prakruti, Bala* of Patient etc. *Sushruta* has not mentioned specifically the *Sadhya-asadhyata* of the *Karnarogas*. But *Vagbhata* has mentioned *Karnasrava* as a *Sadhyavyadhi*. (11)

Discussion on observation:

Age wise distribution:

Patients of age group 15-25 years are more prone to this disease because of different food habits and exposure to cold atmosphere.

Sex wise distribution:

Incidence of *Karnasrava* observed more in females in both group.

Prakruti wise distribution:

It shows *Vata* predominant individuals are more predisposed to *Karnasrava***.**

Laterality:

Although *Karnasrava* can be unilateral or bilateral, in the present study, out of 60 patients 36 had unilateral involvement and 24 had bilateral involvement.

Discussion on result:

Discharge from Ear:

Both groups are statistically significant but when we show percentage of relief, Trial group has shown little bit more relief. Possibility for that, *Arogyavardhini Vati* does the *Shoshan* of different excess *Snigdha Dravyas* present in the ear.

Kandu:

Kandu was relieved in most of the patients. In *Kandu* Trial group who were taken *Arogyavardhini Vati*, has shown good result comparatively.

Karnashula:

Control group has shown 72.44% relief while, Trial group has shown 66.89 % relief. Here Patients who had followed Tab Amoxicillin has shown better results than Tab *Arogyavardhini Vati*.

Sparshasahishnuta:

Trial group has shown 61.37% relief while control group has shown 77.69% relief. *Arogyavardhini Vati* does *Pachan* of *Doshas* and *Kleda*.

Overall result:

In Trial group, 43.33% patients have shown good response, 56.67% shown moderate response. While in Control group, 41.56% have shown good response, 52% moderate response and 6.44 % have shown mild response.

Possible Mode of Action

Arogyavardhini Vati does the *Shoshan* of different excess *Snigdha Dravyas* present in the ear. It also does the *Pachan* of *Drava* and *Kled* and does the *Raktavardhan*. It reduces *Dravatva, Snigdhatva* in *Meda Dhatu*. 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 is helpful to reduce the *Karnasrava*.

As *Kshiri Vriksha* are having *Kashaya Rasa, Ruksha Guna* and *Kapha Pittaghna* properties, it removes the aggravated *Kapha* and *Pitta Guna* and thus helps in reducing *Srava, Kandu*, pain and tenderness from ear.

Conclusion

Karnasrava was found to be more prevalent in the lower strata of the society and labor class workers. The classical textual benefits of *Arogyavardhini Vati* with *Panchakshiri Kwatha Prakshalan* were adopted. This *Vati* is easily available & cheap conservative line of treatment for *Karnasrava*. This *Vati* used for longer duration may prove more effective in *Karnasrava. Arogyavardhini Vati* and *Kshirivriksha Prakshalan* are equally effective and comparatively cheap and safe to use.

References

1. Murthy KRS. Sushruta Samhita. Vol-2, Sharira sthana 5/10, Varanasi; Chaukhambha Oreintalia; 2004. Pp- 81
2. Tripathi Brahmanand. Astanga Hridayam. Uttara sthana 17/1-3, Delhi; Chaukhambha Sanskrit Pratishthan; 2007. Pp- 998
3. Shastri Ambikadutt. Sushruta Samhita. Part-2, Uttara Sthana 20/5, Varanasi; Chaukhambha Sanskrit Sanshthan; 2006. Pp- 86
4. Leach AJ, Morris PS (2006). "Antibiotics for the prevention of acute and chronic suppurative otitis media in children". In Leach, Amanda J. *Cochrane Database Syst Rev* (4): CD004401.
5. Tripathi Indradev. Rasaratna Samuchchaya. 20/93, 3rd ed., Varanasi; Chaukhambha Sanskrit Bhawan; 2006. Pp – 252
6. Mishra Brahma Shankar. Bhavprakasha Nighantu. Vatadi varga /15-16, 11th ed., Varanasi; Chaukhambha Sanskrit Bhawan; 2004. Pp - 519
7. Shastri Ambikadutt. Sushruta Samhita. Part -2, Uttara Sthana 21/42, Varanasi; Chaukhambha Sanskrit Sanshthan; 2006. Pp- 101
8. Tripathi Indradev. Rasaratna Samuchchaya. 20/86-92, 3rd ed., Varanasi; Chaukhambha Sanskrit Bhawan; 2006. Pp – 252
9. Sharma P.V. Dravyaguna Vigyanam. Vol-2, Varanasi; Chaukhambha Bharati Academy; 2005. Pp-664-670
10. Shastri Hari Sadashiv. Astanga Hridaya. Kalpa Sthana 6/13-14, Varanasi; Chaukhambha Sanskrit Pratishthan; 2012. Pp 773
11. Tripathi Brahmanand. Astanga Hridayam. Uttara sthana 17/1-3, Delhi; Chaukhambha Sanskrit Pratishthan; 2007. Pp- 998
12. Tripathi Brahmanand. Astanga Hridayam. Uttara sthana 17/25-26, Delhi; Chaukhambha Sanskrit Pratishthan; 2007. Pp- 1003

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