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PRIYANGUADI TAIL IN THE MANAGEMENT OF KARNASRAVA W.S.R. TO CSOM

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ABSTRACT

Karnasrava is the condition characterized by discharge from Karna and occurs mainly due to vitiation of Vata Kapha Dosha. "Chronic supporative otitis media (CSOM)" have very much resemblance in clinical presentation to Karnasrava. It is a common medical problem of infancy and childhood. The present study has been done on 25 patients of Karnasrava, under single group. "Priyanguadi Tail" has been selected for filling in ear for the present study. The signs and symptoms were studied before and after treatment. Result of the study indicates that clinical study has not given a satisfactory result to researcher. No adverse effect of the trial drug came into light during the course of trial.

KEYWORDS: Karnasrava, CSOM, Priyanguadi Tail.

INTRODUCTION

Karnasrava is a disease mentioned by *Acharya Sushruta* in the chapter named *Karnaroga Vigyaniya*[1] under twenty eight *Karnarogas*. *Acharya Charka* included *karnasrava* as symptom under the four types of *Karnarogas* due to vitiation of different *Doshas.*[2] *Acharya Vagbhata* has described *Karnasrava* as an important symptom among all the five *Karnshoola.*[3] Besides, *Karnapaka* and *Pootikarna* also comprise the features of *Karnasrava*, mentioned by *Acharya Sushruta* and *Vagbhatta.* Infections of the middle ear space is one of the most perplexing medical problems of infancy and childhood,[4] while being the leading cause of hearing loss in this age group. Two out of three children will have at least one episode of otitis media before their third birthday.[5] CSOM is an important cause of preventable hearing loss, particularly in the developing world.[6] It is a reason of serious concern, particularly in children, because it may have long-term effects on early communication, language development, auditory processing, psychosocial, cognitive, development, educational progress and achievement.[7] Risk factors includes age (<5 years old), male sex, ethnicity (white), low birth weight (<2.5 kg), premature birth (<37 weeks gestation), pacifier use, season of birth (spring/summer), lack of breastfeeding, day care attendance, number of siblings, parental education/employment (lower socioeconomic groups), household income (below poverty level), personal/ family history of ear infections, and prenatal/postnatal exposure to cigarette smoke.[8] These factors lead to the increased prevalence of the disease *Karnasrava*. CSOM is characterized by ear discharge, hearing loss, and perforation of TM, edematous middle ear mucosa. Therefore present study has been planned to evaluate the nature of the disease, course of the disease and management with the help of some herbal drugs with the hope that these will prove to be more efficacious and least toxic. So keeping this in mind, based upon the aetiopathogenesis of *Karnagata Roga*, the drug formulation "*Priyanguadi Tail"* which is described in classical text for *Chikitsa* of *Karna roga* have been selected for the present study.

AIMS AND OBJECTIVES

To assess the efficacy of "*Priyanguadi tail"* in the management of "*Karnasrava"* w.s.r. to CSOM.

MATERIALS AND METHODS

The study was Randomized open trial study cleared by the institutional ethics committee on 23/3/2011 s.n. 57. Informed consent was taken from all the patients before including them into the trial. In this study, total 30 patients of *Karnasrava* were registered only in single group. Out of registered thirty patients, only twenty five followed up for the total trial period, five patients left the treatment before the completion of trial and were excluded from the study. The history of the patients subjected for present work was carefully recorded giving

special emphasis to the age, sex, occupation, marital status, habitat, history of discharge regarding its color, character, odour, severity, laterality etc and other associated symptoms.

Dose and Mode of Administration

Fill in external auditory canal up to tragus with *Priyanguadi Tail* before *suryastha* (sunset) for 100 *matra uccharan kaal*(2:30 mins)**.** Duration of trial was 15 days with two follow ups after 7th and 15th day after completion of trial. Patients were instructed to avoid entry of water in ear. (Patient was instructed to put cotton piece with glycerin in ears while taking bath, after that it is advised to be removed).

Inclusion Criteria

- Patient of age group of above 5 years are taken under trial, irrespective of sex, caste, religion.
- Patient suffering from tubotympanic type of CSOM, without complications (up to one year old history).
- On examination tympanic membrane showing perforation.
- Patients were briefed about the entire research plan before taking consent.

Exclusion Criteria

- Patient not willing for trial.
- Patient showing features of atticoantral type of CSOM (like purulent foul smell discharge).On examination, there is marginal posterosuperior or attic perforation of tympanic membrane or some associated with cholesteatoma.
- Clinical picture presented with complications, Congenital deformity, malignancy presented with *karnasrava*, blockage due to stenosis of external auditory canal, disease other than ear pathology (Cerebrospinal fluid ottorrhoea, Parotid abscess rupturing in EAC, Temporomandibular joint abscess rupture in EAC).

Criteria of diagnosis

A special proforma was prepared incorporating all the sign symptoms based on both ayurvedic as well as modern description. The patients were diagnosed on the basis of sign and symptoms of *karnasrava* (CSOM-benign type). The diagnosis was confirmed on the basis of otoscopic findings. X-ray mastoid has been done for assess the chronic nature of disease and to rule out the possibility of complications. Routine blood investigations were also done.

Subjective criteria

Table no. 1: Ear discharge grading.

No discharge	**0**
Serous	**1**
Mucoid / mucoprulent	**2**
Sanguineous	**3**

Table no. 2: Pain grading.

No earache	0
Not continuous	1
Continuous but not incapacitating normal activity	2
Continuous throughout and incapacitating normal activity	3

Table no. 3: Itching (*Karnkandu*) grading.

No itching	**0**
Occasional itching	**1**
Continuous mild itching	**2**
Continuous severe itching	**3**

Objective criteria

Table no. 5: Hearing loss grading.

0 -20 db	**0**
20 -40 db	**1**
40 -60 db.	**2**
> 60 db.	**3**

Table no. 6: Perforation (central) grading.

Small (1 quadrant)	0
Moderate (2 quadrant)	1
Large (3/4th of quadrant/ subtotal)	2
Total	3

Table no. 7: Abnormal condition of middle ear mucosa grading.

Not visible	0
Pale, pink, moist	1
Red	2
Red, edematous, swollen	3

Statistical Analysis

The information gathered regarding demographic data was given in percentage. The scoring of criterias of assessment was analyzed statistically in terms of B.T. (before treatment), A.T. (after treatment), X (B.T.- A.T.), S.D. (Standard deviation), S.E. (Standard Error), Paired 't' test was carried out at the level of $p< 0.05$ and $p < 0.001$.

RESULTS AND OBSERVATIONS

Maximum number of patients (24%) belonged to 5-10 years age, 52% were male, 56% were married, 72% were belonged to rural area, , all the (100%) patients were Hindus, 36% were students, 52% belonged to middle class, 64% had mixed diet habit, 40%were no addiction, 80% have *Mandagni*, 44% patient were of *Vata kaphaja prakriti*, 72% were of *Madhyama satva*, 84% patients were of *Madhyama sara*, 76% of *Madhyama Samhanana*, 84% patient were of *Madhyama Satmya*.

Discharge was observed in 100% patients, Hearing loss in 80% patients, complain of pain in 28%, complain of itching in 100%, Perforation was observed in 100%,

abnormal condition of middle ear mucosa was observed in 96% patients, pre-post lymphadenitis found in 12% of patients, unilateral discharge was found in 80%, serous discharge was found in 32% patient, mucoid/mucoprulent discharge found in 56%. small tympanic membrane perforation was found in 40% patient, 48% perforation was of moderate type. 20-40 db hearing loss was found in 52% of patients.

Effect of Therapy

The efficacy of *Priyanguadi tail* for *karnpoorana* in 25 patients was adjusted on varied parameters and results were derived after execution of statistical methodology. The effect of therapy on criteria assessed has been presented here as under:

Table No. 8: Effect of therapy on Signs and Symptoms.

Sr. No.	Signs and Symptoms	N	Mean		X (d) BT-AT	%age relief	SD	SE	T	p
			BT	AT						
1.	Discharge	25	1.80	1.00	0.80	44	0.40	0.08	9.79	<0.001
2.	Hearing loss	20	0.70	0.43	0.26	38	0.44	0.08	3.2	<0.01
3.	Pain	7	0.3	0.06	0.23	78	0.43	0.07	2.97	<0.01
4.	Itching	25	1.4	0.28	1.12	80	0.33	0.06	16.88	<0.001
5.	Perforation	24	1.68	1.24	0.44	26	0.50	0.10	4.34	<0.001
6.	Abnormal middle ear mucosa	24	1.8	0.88	0.92	51	0.57	0.11	8.0	<0.001

Table no. 9: Overall Result of Treatment In 25 Patients of *Karnasrava* Under Trial.

Sr. No.	Assessment	No. of Patients	% age
1.	Cured	0	0
2.	Markedly Improved	0	0
3.	Moderately Improved	3	12
4.	Slightly Improved	16	64
5.	Unimproved	6	24

DISSCUSSION

The disease "*Karnasrava"* occur due to several *Nija Nidana* such as *Avashyaya, Pratishyaya* etc. Due to these etiological factors, vitiated *Doshas* get accumulated (*Sthanasamsraya*) in the ear, and causes *Twak, Rakta, Mamsa Dhatu Dusti*, which leads to *Karnasrava.* Due to several *Aagantuja Karana* such as *Karnkandu* by unsterile instrument, *Mithyayogen* of *Shastra Karma*, polluted water entry in to the ear canal (*Nimajjate Jale*) may cause *Karnasrava*. Out of 25 patients completing the trial, maximum patients (24%) belonged to age group 5-10 years. This observation reveals that the disease *Karnasrava* is most common in young age especially in children because of *Kapha* predominance in this age. *Vata Kaphaja Prakriti* were found in 44% of Patients followed by 40% patients were having *Vata Pittaja Prakriti. Karnasrava* is also having the *Vata* and *Kapha* dosha in predominance, so *Prakriti* of the patient may also influence the development of the disease. *Vata* and *Kapha Doshas* are mainly involved in *Karna Srava* while in *Karna Paka* and *Pooti Karna, Pitta Dosha* plays a role in its *Samprapti.* The probable mode of action of drug can be attributed to the annexed effect of the pharmacotherapeutic properties of various constituents of the trial drug. To know the mode of action of a drug it is imperative to look into the *Rasa Panchaka* as it is fundamental of pharmacotherapeutic of Ayurvedic management.

Table no. 10: Rasa Panchaka of contents of Priyanguadi tail.

Drug	*Rasa*	*Guna*	*Veerya*	*Vipaka*	*Dosh Karma*
Priyangu	*Tikta, Kashaya, Madhur*	*Guru, Ruksha,*	*Sheeta*	*Katu*	*Tridosh shamaka*
Mulethi	*Madhur*	*Guru, Snigdha*	*Sheeta*	*Madhur*	*Vata pitta shamaka*
Patha	*Tikta*	*Laghu, Tikshna*	*Ushna*	*Katu*	*Tridosh shamaka*
Dhataki	*Katu, Kashaya*	*Laghu, Ruksha*	*Sheeta*	*Katu*	*Kaphapitta shamaka*
Shalparni	*Madhur, Tikta*	*Guru, Snigdha*	*Ushna*	*Madhur*	*Tridosh Shamaka*
Manjistha	*Tikta, Kashaya, Madhur*	*Guru, Ruksha*	*Ushna*	*Katu*	*Kaphapitta shamaka*
Lodhra	*Kashaya*	*Laghu, Ruksha*	*Sheeta*	*Katu*	*Kaphapitta Shamaka*
Laksha	*Kashaya*	*Sheet, Snidha. Laghu*	*Anushna*	*Katu*	*Kapha shamaka*
Manahashila	*Tikta, Katu*	*Snigdh, Guru*	*Ushna*	*Katu*	*Kaphavata shamaka*
Kapittha swaras	*Madhur, Amla, Kashaya*	*Guru*	*Sheet*	*Madhura, Amla, Katu*	*Vattpitta shamaka*
Til tail	*Madhura, Kashaya, Tikta*	*Guru, Snigdha*	*Ushna*	*Madhura*	*Vata shamaka*

Priyanguadi Tail is *Kashaya Rasa* (astringent), *Guru(heavy), Snigdha(unctuous), Samseetoshna Veerya, Katu Vipaka and Kaphavata Shamaka* properties**.** By analyzing properties of various contents of formulation, it can be stated that majority of them act on *Vata* and *Kapha Doshas.* Therefore these properties greatly help in breeching the *Samprapti* of *Karnasrava*. Maximum *Dravya* in *Priyanguadi Tail* are of *Kashaya Rasa*, which

is *Shoshak, Ropak and Sandhankar* in action. These actions help in drying up the secretion and regenerate the tympanic membrane in case of perforation (a common finding in CSOM). *Tikta Rasa* is *Vishaghna, Krimighna* and *Pooya Upshoshak*. These properties account for the antibiotic action of the drug. *Priyangu* has been described in *Priyanguadi* and *Anjanadi gana* by *Acharya Sushruta*. These *Gana* are *Sandhaniya, Vrana Ropak and Vishopshamak* in action. *Yashtimadhu* is mentioned under *Jeevaniya Mahakashaya* (Ch.Su.4/1). The drugs of *Jeevaniya Mahakashaya* are also called as restoratives. They replenish the wear and tear of the body. They improve the immunity of body and strengthen the body's defense mechanism to fight against bacterial invasion. *Manahshila* and *Yashtimadhu* is *Kanduhar* in action as mentioned in R.R.S. and Charaka samhita respectively. These properties help in relieving the itching, which is one of the symptoms of CSOM.

CONCLUSION

From the results and observations received from this study, it can be concluded that prevalence of *Karnasrava* (CSOM) is found to be more in 5-10 years age group. *Vata kaphaja Prakriti* people are more prone for this disease. Middle class and lower middle class people are mostly affected by this disease. During the treatment period, *pathya* and *apathya* should strictly follow. Water entry into the ear, hot & humid atmosphere, scratching of the ear by unsterile instrument such as, matchstick, hair pin, key & finger nail etc. were the main causes. No adverse effect of the trial drug came into light during the course of trial. As the present clinical study has not given a satisfactory result to researcher. Therefore Few humble recommendations are forwarded in this respect..In management of a chronic disease like CSOM the trial duration of 15 days doesn't appear to be sufficient. In comparison to the single trial drug, combine drug therapy could have shown better result.

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