



A CLINICAL STUDY ON *HARITAKYADI YOGA* IN *TUNDIKERI* (TONSILLITIS) IN CHILDREN
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ABSTRACT:

Children represent the future, and ensuring their healthy growth and development ought to be a prime concern of all societies. Children are vulnerable to malnutrition and infectious disease, many of which can be effectively prevented or treated. Child's health includes physical, mental and social wellbeing. Most parents know the basics of keeping children healthy, like offering them healthy foods, making sure they get enough sleep and exercise and ensuring their safety. Children aged 5-15 years old are mostly likely to get tonsillitis, but it can affect anyone. Tonsillitis is a common infection of the tonsils. The tonsils sit back of the throat. Tonsils are the elliptical shaped pink masses of tissues on either side at the back of throat. They trap the germs and bacteria that enter through the nose and mouth, and protect from infection. A disease which is similar to tonsillitis in clinical presentation in *Ayurveda* is *Tundikeri*. *Acharya Kashyap* has mentioned symptoms similar to *Tundikeri* in *Vednaadhyaya* like *Kanthavedana* (fever, anorexia, lethargy), *Kanthshotha* (itching and inflammation in throat). Thus, in the present study *Tundikeri* (Pharyngeal Tonsillitis) is taken as the subject of intervention with the drug "*Haritakyadi Yoga*".

Key Words: *Tundikeri* (tonsillitis), *Kanthavedana* (pain in throat), *Kanthashotha* (itching & inflammation in throat).

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INTRODUCTION

Ayurveda is the most ancient health science in the world. It is not just a health science but can truly be called as a science of life. *Ayurveda* is a holistic healthcare system and emphasizes on balancing the body, mind and spirit to prevent as well as treat the disease. The initial classics texts of *Ayurveda* described this science to be mainly classified into eight branches on the basis of treated diseases and treatment modalities [1]. The immunity involves a group of organs and systems and is a complex one; the lymphatic system plays a key role in this. Tonsils, a set of lymph glands present in the entry of oral cavity one each on either side are a part of lymphatic and immune system. Whenever there is an infection in the oral cavity or upper respiratory tract, the tonsils are first infected and swollen and they try to prevent the infection. Therefore, they are popularly named as the 'Police man' of GI tract [2]. The inflammation of the tonsils is called the tonsillitis. Person of any sex and age may fall victim to bacterial infection leading to tonsillitis. It is a common condition; with nearly all children becoming infected at least once. There are 74,55,494 cases of tonsillitis in India per year. About 2,00,000 tonsillectomies done in India per year [3]. A disease which is similar to tonsillitis in clinical presentation in *Ayurveda* is *Tundikeri* which is described under *Mukha Roga*. *Acharya Sushruta* is the first to describe anatomy of *Mukha*. According to *Acharya Sushruta*, *Mukha* consists of seven sections. It is mentioned under *Talugata Roga* in *Sushruta Samhita* [4]. It is manifested as a swelling in *Talu* associated with burning sensation and suppuration. *Acharya Vagbhata* has

mentioned the disease "*Tundikerika*" as occurs in the *Hanu Sandhi Pradesh* [5]. In *Ayurveda* the disease *Tundikeri* can be compared with the disease tonsillitis. Thus, in the present study *Tundikeri* (Pharyngeal Tonsillitis) is taken as the subject of intervention with the drug "*Haritakyadi Yoga*" mentioned in the "*Ravana Samhita*" under "*Kumar Tantra*" [6]

MATERIAL & METHODS

Method of Data Collection:

After the completion of treatment, the assessment was done on the same criteria as before the treatment and scoring was done on the same pattern. The different tables of scores, obtained before treatment and after treatment, is prepared for the comparison and statistical analysis was done.

Statistical Analysis

On comparison of subjective criteria before and after treatment Wilcoxon Signed Rank Test and for objective criteria Mann Whitney Rank Sum test was applied.

Study Design – Open Labelled Single Arm Study

Study setting- Study- Patients were randomly selected from OPD & IPD of Rishikul Ayurvedic College & Hospital, Haridwar.

Study population- 11.6%

Study sample - 50

Sample size- 50

Diagnostic Criteria: Diagnosis was made on the basis of *Lakshana* of *Tundikeri*(tonsillitis). *Toda* (pain in throat), *Raga*(redness of throat), *Jwara*(fever), *Daha*(burning sensation), *Dysphagia*, *Shotha* (swelling in throat), lymph-node enlargement, lymph-node tenderness.

Inclusion criteria- Children age group of 5-10 years with *Tundikeri* belonging to either sex. Children having classical sign & symptoms of *Tundikeri*. Mild to moderate cases.

Exclusion criteria- Children with age below 5 and above 10 years.

Pre-diagnosed cases of children with conditions like T.B, malignancy, respiratory disorders, other critical pathological conditions and complications related to the disease such as peritonsillar abscess, parapharyngeal abscess, otitis media etc.

Criteria for withdrawal- Aggravation of symptoms, Inter current illness , Personal Matters , LAMA (Leave Against Medical Advice)

Criteria for assessment-

Subjective criteria - *Toda* (Pain), *Daha*(Burning sensation), *Jwara*(Fever), *Raga*(Redness), Dysphagia.

Objective criteria- *Shotha*(swelling in throat), Lymphnode enlargement. Lymphnode Tenderness.

Table No. 1: Subjective parameters

S no.	Parameters	Grade 0	Grade 1	Grade 2	Grade 3
1.	<i>Toda</i> (Pain)	No pain	Mild tenderness on pressing	Pain during deglutition	Pain during rest
2.	<i>Daha</i> (Burning sensation)	No burning sensation	Localized burning sensation	Burning sensation throughout day but tolerable	Intolerable generalized burning sensation throughout the day
3.	<i>Jwara</i> (Fever)	Normal temperature	98.6-100°F	100-102°F	>102°F
4.	<i>Raga</i> (Redness)	No erythema	Light red	Moderate red	Bright red
5.	Dysphagia	No difficulty	Difficulty in taking solid food only	Difficulty in taking solid and liquid	Difficulty in swallowing saliva

Table No. 2: Objective Criteria

Sr no	Parameters	Grade 0	Grade 1	Grade 2	Grade 3
1.	<i>Shotha</i>	No <i>Shotha</i>	Tonsils cover 1/4th	Tonsils cover half	Tonsils cover

			of oral cavity	of oral cavity	more than half of oral cavity
2.	Lymph node enlargement	Not palpable	Unilateral enlargement	B/L enlargement	Visible prominent lymph node
2(i)	Tenderness of lymph nodes	No tenderness	Mild	Moderate	Severe

Investigations- Hb%, TLC, DLC, ESR

Method of Treatment:

Selected Drug: *Haritakyadi Yoga*

Form Of Medicine: Powder

Anupaan - Honey

Composition of Medicine: *Haritaki, Vacha, Kushtha.*

Follow Up: There was be total 4 follow ups. First follow up after 3 days, second after 7 days, third and fourth follow up was be of 15 days.

Dose of Medicine

Dose is calculated by using Young's Formula for

every patinet: $\frac{Age}{Age+12} \times \text{Adult Dose}$

Adult dose is 3.5-7.5 gm.

Route of administration-Orally

Anupaan: Honey

Procedure: The medicine was be given in two divided doses along with *Madhu* (Honey).

Observations & Results

Total 50 patients were registered and out of them 5 patients left against medical advice.

Table No.3: Chief Complaints

Chief Complaints	No of Patients	Percentage
<i>Toda</i> (pain in throat)	42	93.3%
<i>Daha</i> (burning sensation)	4	8%
<i>Jwara</i> (fever)	16	35%
<i>Raga</i> (redness in throat)	43	95.5%
Dysphagia	43	95.5%
<i>Shotha</i> (swelling in throat)	43	95.5%
Lymph-node Enlargement	18	40%
Lymph-node Tenderness	18	44.4%

Out of total patients the major complaints were redness, Dysphagia, swelling in throat and pain in throat which are found in 95.5% and 93%

respectively. Lymph-node tenderness and enlargement were found in 44.4% and 40%. Fever

was found in 35% of the children and burning sensation in throat was found in 8% of all patients.

Table No. 4: Effect of Therapy on Subjective Criteria

Parameter	N	Median Score		Mean Score		D	% of Relief	SD	SE	W	P	Significance
		BT	AT	BT	AT							
Toda	43	2	0	1.86	0.37	1.49	80.10	0.65	0.09	-946	<0.001	HS
Daha	9	0	0	1.66	1.22	0.44	26.5	0.28	0.04	-10	0.125	Non Significant
Jwara(fever)	16	0	0	1.62	0.06	1.56	96.29	0.81	0.121	-136	<0.001	HS
Raga	44	2	1	1.79	0.7	1.09	60.89	0.65	0.09	-741	<0.001	HS
Dysphagia	41	1	0	1.43	0.29	1.14	79.72	0.63	0.09	-703	<0.001	HS

Table No.5: Effect of Therapy on Objective Criteria

Parameter	N	Median		Mean		D	% of Relief	SD	SE	T	P	Significance
		BT	AT	BT	AT							
Shotha(swelling in throat)	42	2	1	1.9	1.09	0.81	74.31	0.67	0.10	2508	<0.001	HS
Lymph-node Enlargement	21	0	0	2.04	1.52	0.52	25.49	0.53	0.08	2158	0.374	Non Significant
Lymph-node Tenderness	23	0	0	1.56	0.69	0.87	55.76	0.58	0.08	2318	0.029	Significant

Table No.6: Effect of Therapy on Hematological Parameters

Hematological Parameters	N	Mean Score			% of Relief	SD +-	SE +-	T	P	
		BT	AT	D						
Hb	39	12.315	12.484	-0.169	-1.37	0.374	0.05	1456.5	0.404	
TLC	39	13687.18	6883.846	6803.333	49.70	10006.94	1602.393	2216	<0.001	
DLC	Neutrophils	39	39.42	41.45	-2.03	-5.14	6.881	1.109	1513.5	0.791
	Eosinophils	39	2.24	1.24	1.01	45.08	3.31	0.53	1946	<0.001
	Basophils	39	0.579	0.579	0	00	0.222	0.035	1509	0.757
	Monocytes	39	2.95	2.59	0.355	12.03	1.04	0.166	1709	0.092
	Lymphocytes	39	54.89	54.11	1.00	1.82	6.99	1.12	1555	0.889
ESR	39	19.69	14.58	5.10	25.9	4.42	0.70	1992	<0.001	
AEC	39	267.52	87.62	155.9	58.28	386.85	61.94	2199.5	<0.001	

Table No.7: Total Effect of Treatment Modules

Results	No. Of Patients	Percentage
Complete Improvement	2	4.44
Marked Improvement	16	35.55
Moderate Improvement	26	57.77
Mild Improvement	1	2.22
Unchanged	0	00

Complete improvement was found in 2 (4.44%) patients, Marked improvement was found in 16 (35.55%) patients, Moderate improvement was found in 26 (57.77%) and mild improvement was found in 2.22% patient.

DISCUSSION

In general practice children frequently visit with recurrent throat problems and the incidence of this

disease accounts for about 7% of all visits to the current pediatrician^[7]. The tonsil tissues can become diseased with recurrently infected and they lose their effectiveness in helping the immune system and actually become a source of recurrent infection. Due to recurrent attacks of Tonsillitis, Tonsils fail to regain its normal shape and size with hypertrophy and hyperemia of pillars which may lead to several

complications like recurrent upper respiratory tract infections, difficulty in deglutition, growth retardation, bronchial asthma, Rheumatic fever, snoring etc^[8]. The trial drug *Haritakyadi Yoga* consists of three herbs- *Haritaki*, *Vacha* and *Kushtha*. The drug is administered with honey. The drug *Haritakyadi Yoga* has *Katu*, *Tikta rasa*, *Ushna Veerya*, *Laghu*, *Teekshna guna* and *Katu & Madhura Vipaka*. Dominant *Dosha-karma* of the combination is *Kapha-Vata Shamak./ Tridosha Shamak*. The pharmaco-therapeutic properties are *Deepana* (stimulate digestive fire), *Pachana*(digestive) and *Vatanulomana*(carminative). The prime factor in the disease tonsillitis is *Sama Kapha & Rakta Dosha*. *Deepana*, *Pachana* properties of the drug will digest the *Sama Kapha* by increasing the *Jatharagni* (digestive fire) as well as *Rasagni* and *Bhutagni*. Furthermore, the *Shothahara Karma* (reducing swelling property) of all drug will neutralize *Strotorodha* (blockage in channels) in *Rasavaha*, *Raktavaha & Mansavaha Strotas* (all body channels). *Tridosha-shamaka* property of *Haritaki* will neutralize *Pitta* and *Rakta Dosha* due to its *Madhura Vipaka*. In modern perspective, *Haritaki* has anti-inflammatory, analgesic property which is useful in sore throat and help in relieving pain. Anti-microbial and antipyretic property of *Vacha* along with analgesic and anti-inflammatory property will help reducing microbial infection, reducing fever, pain in throat and also improves voice^[9].

CONCLUSION

After a thorough study of the observations and results, the following conclusions can be drawn: *Samprapti Vighatan* is achieved by administering the

drug *Haritakyadi Yoga* which contain *Haritaki*, *Vacha* and *Kushtha*. In the present study 50 children of either sex diagnosed with tonsillitis were selected. The overall observation in the study revealed that maximum children were of age group 8 to 10 years. No adverse reaction of treatment was noted. Treatment was given for 40 days. The effect of the treatment has shown statistically highly significant result in *Toda*(pain), fever, dysphagia, swelling in throat and *Raga*(redness). Significant result in lymph-node tenderness. Non- significant result in *Daha*(burning sensation), lymph-node enlargement. Among hematological parameters the drug showed significant result in ESR, AEC and TLC. The overall effect of treatment module showed moderate improvements i.e., 57.77% patients, marked improvement by 35.55% patients, complete improvement by 4.44% patients and mild improvement by 2.22% patients.

Recommendations For Further Studies:

The following are the possible considerations for future studies of similar kinds:

Study should be carried out in large sample size. Anti-microbial study (Bacterial culture and sensitivity test) of the drugs should be carried out to check the efficacy of herbal drugs for microorganisms). Increasing the duration of the study. Experimental studies to evaluate the effect of drug on immunoglobulins.

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