WJPMR, 2026, 12(2), 305-316 Research Article Impact Factor: 6.842

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

ISSN (O): 2455-3301
ISSN (P): 3051-2557
Coden USA: WJPMBB

A CLINICAL STUDY TO EVALUATE THE EFFECT OF *KSHARA GUTIKA* AND *PATOLADI KWATHA* IN THE MANAGEMENT OF *TUNDIKERI* W.S.R. TO TONSILLITIS

Dr. Akanksha*[1], Prof. Dr. Vijayant Bhardwaj[2], Prof. Dr. Satish Kumar Sharma[3], Dr Sunder Sharma[4]

[1]PG Scholar, Dept. of Shalakya Tantra, Rajiv Gandhi Government Post Graduate Ayurvedic College and Hospital, Paprola, Distt. Kangra, Himachal Pradesh.
[2]HOD, Dept. of Shalakya Tantra, Rajiv Gandhi Government Post Graduate Ayurvedic College and Hospital, Paprola, Distt. Kangra, Himachal Pradesh.
[3]Professor, Dept. of Shalakya Tantra, Guru Nanak Ayurvedic Medical College and Research Instiitute, Gopalpur, Ludhiana.
[4]MD (Kayachikitsa) IPGT&R Jamnagar, Gujarat, Deputy Director Technical (Retd) Ex Lecturer Kayachikitsa cum RMO, MGGV Chitrakoot, MP.

***Corresponding Author: Dr. Akanksha**

PG Scholar, Dept. of Shalakya Tantra, Rajiv Gandhi Government Post Graduate Ayurvedic College and Hospital, Paprola, Distt. Kangra, Himachal Pradesh. **DOI:** https://doi.org/10.5281/zenodo.18430847

How to cite this Article: Dr. Akanksha*[1], Prof. Dr. Vijayant Bhardwaj[2], Prof. Dr. Satish Kumar Sharma[3], Dr Sunder Sharma[4] (2026). A Clinical Study To Evaluate The Effect Of Kshara Gutika And Patoladi Kwatha In The Management Of Tundikeri W.S.R. To Tonsillitis. World Journal of Pharmaceutical and Medical Research, 12(2), 305–316.

Article Received on 24/12/2025 **Article Revised on 13/01/2026** **Article Published on 01/02/2026**

ABSTRACT

Tundikeri is an Ayurvedic pathological condition affecting the tonsillar region and throat, commonly seen today due to improper diet and lifestyle. Individuals from lower socio-economic groups are more susceptible because of reduced immunity, leading to recurrent episodes. Clinically, *Tundikeri* closely correlates with tonsillitis in modern medicine, sharing similar features. Tonsillitis affects both children and adults and can cause significant discomfort and morbidity. Antibiotics, the mainstay of allopathic treatment, provide only temporary relief and fail to prevent recurrence, while repeated use may result in adverse effects. In some cases, tonsillectomy becomes necessary, with the risk of postoperative complications. Owing to the lack of a definitive and recurrence-preventive management approach, the present study was undertaken to evaluate the efficacy of *Kshara Gutika* and *Patoladi Kwatha in the* management of *Tundikeri*. **Methods:** 32 patients suffering from Tonsillitis (*Tundikeri*) were selected from Shalakya Tantra O.P.D/IPD of RGGPG Ayurvedic College& Hospital, Paprola, H.P. were randomly selected and grouped in three groups, where Group I received *Kshara Gutika*, Group II received *Patoladi Kwatha* and Group III received both the Drugs for a period of 15 days. Results: The responses of both the groups were assessed clinically after 15 days of treatment. There was a statistically significant change ($p < 0.001$) in the overall signs and symptoms of Tonsillitis. **Conclusion:** The final evaluation proved that all the groups were statistically significant but Group III with combination of both drugs is better in reducing the signs and symptoms of Tonsillitis.

KEYWORDS: *Tundikeri*, Tonsillitis, *Kshara Gutika*, *Patoladi Kwatha*.

INTRODUCTION

Ayurveda includes eight branches, known as *Ashtanga Ayurveda*, that together form a comprehensive system of health and healing which includes internal medicine, pediatrics, psychiatry, ent and eye care, surgery, toxicology, geriatrics, and reproductive health. Each branch addresses specific areas of the body and mind, reflecting *Ayurveda*'s holistic approach to well-being.

Shalakya tantra, one amongst the eight branches of *Ayurveda*, deals with the precious supraclavicular organs, head and neck, the diseases affecting them, and management.[1]

The origins of *Ayurveda* can be traced back to the *Vedic* period, where some scholars consider it as an *Upaveda* of either the *Rigveda* or *Atharvaveda*. As it is an independent science running parallel to the stream culture, that's why *Maharishi Kashyapa* has rightly

mentioned it as the 'fifth *Veda*', superior to all the other *Vedas*. In *Ayurveda*, *Tundikeri* has been described under the *Mukha Roga*. *Acharya Charaka* has classified *Mukha Rogas* on the basis of the predominance of *Doshas*. *Acharya Sushruta* has enumerated it under *Talugata Roga*[2], whereas *Acharya Vagbhata* has kept it under *Kanthagata Roga*.[3] It is predominantly caused by the vitiation of *Kapha* and *Rakta Doshas*. Clinically, it presents as a swelling resembling the fruit of the Gossypium plant, characterized by mild pain, burning sensation, and occasionally suppuration. This swelling typically occurs near the *Hanusandhi* (mandibular joint) and is commonly encountered now-a-days due to improper dietary habits and lifestyle practices. Lower socio-economic group people are particularly prone as the immunity status is low in them. These factors coupled together results in recurrent episodes of disease.

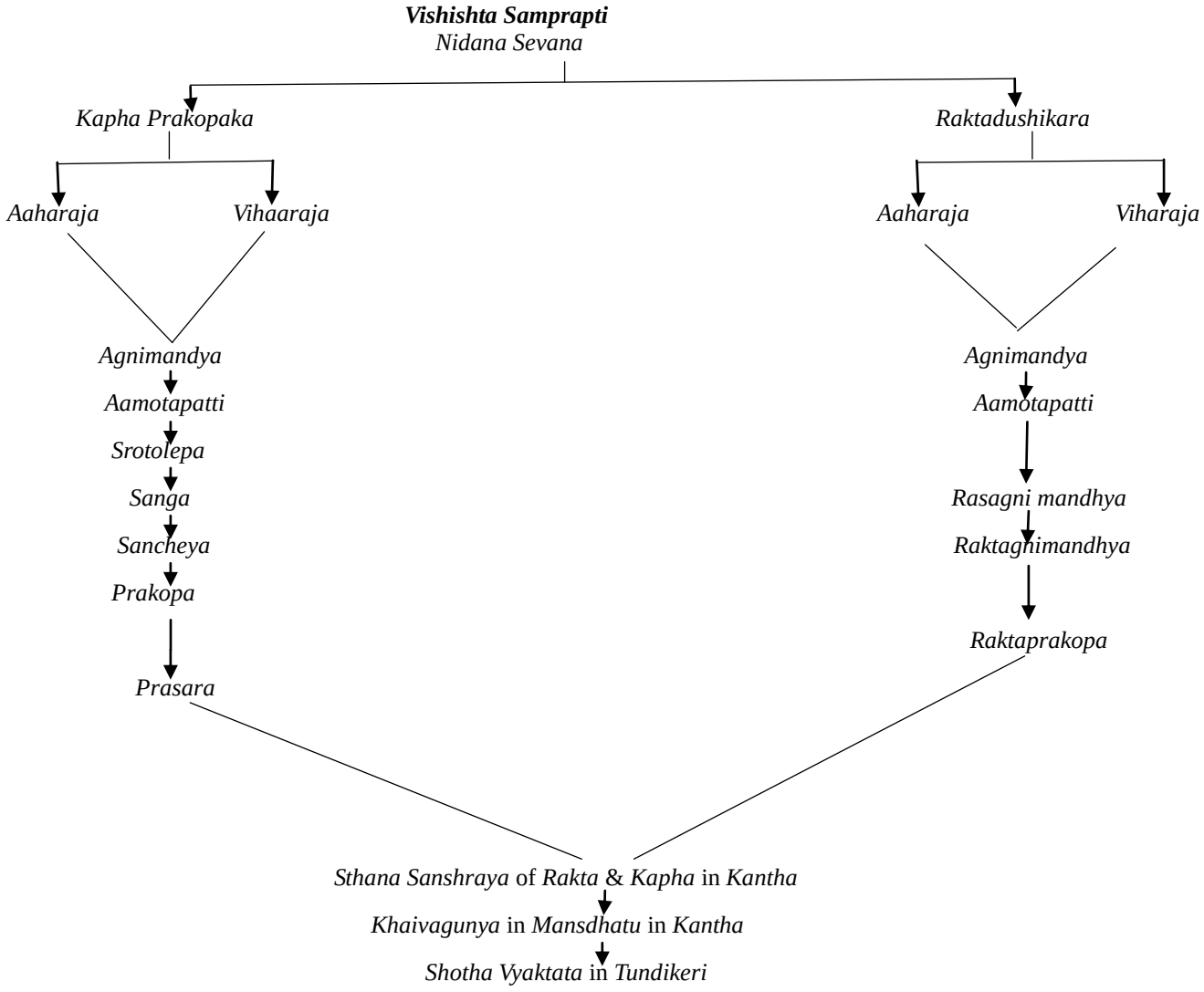
Acharya Charaka has mentioned medical treatment of *Mukha Roga*. *Acharya Sushruta* has put forward the *Chikitsa* of this particular disease as per the lines of the disease "*Galashundika*" followed by local application of drugs having properties of *Lekhana*, *Shothahara*, *Sandhaniya*, *Ropana*, *Rakta Stambhana* and *Vedanasthapana*. He has also enumerated *Tundikeri* under the classification of *Bhedya Roga* in *Sutra Sthana*.[4]

Similarly, in *Ashtangahridya*, references regarding this disease are available in an elaborated manner, particularly its site of origin, i.e. *Hanusandhiashrita Kantha Pradesha*. *Acharya Vagbhata* has also quoted the surgical measures for treating this disease.

Samanya Samprapti

Udbhava - *Aamashya Samutha* (as it is *Kapha* dominating disease)
Sanchara - *Rasayni*
Adishthana - *Mansa Dhatu*
Dosha - *Kapha*
Dushya - *Rasa*, *Rakta*, *Mansa*.
Sroatsa - *Rasvahi*, *Raktavahi*, *Mansvahi*.
Dushti - *Sanga*, *Vimarggamana*
Vyakt Sathana - *Talu* (*Sush*.), *Kantha* (*Vag*.)
Rogmarga - *Bahya Rogmarga*
Agni - *Jatharagni*, *Rasagni*, *Raktagni*, *Mansagni*
Vyadi Swabhava - *Ashu* (Acute), *Chirkari* (Chronic)
Pratyatma Lakshana - *Karpasphala Sannibha Shotha*

Vishishta Samprapti



In modern science, the disease *Tundikeri* can be correlated with tonsillitis as both the terminologies have similar features. Antibiotics, the mainstay of allopathic treatment, provide only temporary relief and fail to prevent recurrence, while repeated use may result in adverse effects. In some cases, tonsillectomy becomes necessary, with the risk of postoperative complications. Owing to the lack of a definitive and recurrence-preventive management approach, the present study was undertaken to evaluate the efficacy of *Kshara Gutika* and *Patoladi Kwatha* in the management of Tundikeri.

AIMS AND OBJECTIVES OF THE RESEARCH WORK

1. To evaluate the effect of *Kshara Gutika* in the management of *Tundikeri* w.s.r. to Tonsillitis.
2. To evaluate the effect of *Patoladi Kwatha* in the management of *Tundikeri* w.s.r. to Tonsillitis.
3. To evaluate the effect of *Kshara Gutika* in combination with *Patoladi Kwatha* in the management of *Tundikeri* w.s.r. to Tonsillitis.
4. To compare the efficacy of *Kshara Gutika* and *Patoladi Kwatha* in the management of *Tundikeri* w.s.r. to Tonsillitis.
5. To study the untoward effects of drugs if any.

MATERIAL AND METHODS

Study design: A randomized clinical study.

The study was approved by Institutional ethics committee letter no. Ayu/IEC/2023/1373 Dated on 17/11/2023. The Clinical trial was registered under CTRI No. CTRI/2024/08/072114.

Drug Review: In this study, *Kshara Gutika* and *Patoladi Kwatha* were selected.

Table no.1: Ingredients of *Kshara Gutika.*

Sr. No.	Ingredients	Botanical name	Part used	Quantity
1.	*Pippali*	*Piper longum* Linn.	Fruit	1 part
2.	*Pippali Mool*	*Piper longum* Linn.	Root	1 part
3.	*Chavya*	*Piper retrofractum* Vahl.	Root	1 part
4.	*Chitrakamool*	*Plumbago zeylanica* Muell Arg.	Root	1 part
5.	*Shunthi*	*Zingiber officinale* Roxb.	Rhizome	1 part
6.	*Talisha Patra*	*Abies webbiana* Lindle	Leaf	1 part
7.	*Ela*	*Elettaria cardamomum* Maton	Seed	1 part
8.	*Maricha*	*Piper nigrum* Linn	Fruit	1 part
9.	*Twaka (Dalchini)*	*Cinnamomum zeylanicum* Breyn.	Stem Bark	1 part
10.	*Palasha Kshara*	*Butea monosperma* Lam.	*Kshar*	1 part
11.	*Mushkaka Kshara*	*Schredera swietenioides* Roxb.	*Kshar*	1 part
12.	*Yavkshara*	*Hordeum vulgare* Linn.	*Kshar*	1 part
13.	*Guda*			24 part

Method of preparation

A good quality of raw material of *Kshara Gutika*, as shown in Table 1 was purchased. Waste material was separated very carefully from raw material and thrown away. Firstly bark of the *Mokha* plant was taken, and then it was ensured that it was free from moisture and impurities. Then, dried plant material was completely burnt to white ash (*Bhasma*) using open fire or a controlled furnace, and the ash was taken. 8 parts of water were added, stirred well, and allowed to settle overnight. After Careful filtration of the supernatant liquid through a muslin cloth or fine filter was done two times, followed by boiling of the filtered liquid over a moderate flame until complete evaporation was achieved. Then the remaining solid residue was collected as *Kshar* and was dried and kept in a container. After this, all the ingredients of the *Gutika* were ground to obtain fine powders. All the powdered ingredients were thoroughly mixed with *Guda*. *Gutikas* were formed using tablet tablet-making machine and were added to a *Mokha Kshar* and were dried. Lastly, added in the container and sealed with a label at Charaka pharmacy of RGGPG Ayurvedic College and Hospital, Paprola, Distt. Kangra(H.P.) vide B.No.50/24, M.F.D 21/01/2025.

Table no. 2: Ingredients of *Patoladi Kwatha.*

Sr. No.	Ingredients	Botanical name	Part used	Quantity
1.	*Patola*	*Trichosanthes dioica* Roxb.	Leaf	1 part
2.	*Shunthi*	*Zingiber officinale* Roxb.	Rhizome	1 part
3.	*Amalaki*	*Emblica officinalis* Gaertn.	Fruit	1 part
4.	*Haritaki*	*Terminalia chebula* Retz.	Fruit	1 part
5.	*Bibhitaki*	*Terminalia bellirica* Roxb.	Fruit	1 part
6.	*Indrayana mool*	*Citrullus colocynthis* Schrad.	Root	1 part
7.	*Trayamana mool*	*Gentiana kurroo* Royle.	Root	1 part
8.	*Katuki*	*Picrorhiza kurroa* Royle ex Benth.	Root	1 part
9.	*Haridra*	*Curcuma longa* Linn.	Rhizome	1 part

10.	*Daruharidra*	*Berberis lycium* Royle	Root	1 part
11.	*Guduchi*	*Tinospora cordifolia* Willd.	Stem	1 part

***Anupana* –** *Madhu*

Method of preparation- A good quality of raw material of *Patoladi Kwatha*, as shown in Table 2 was purchased. Waste material was separated very carefully from raw material and thrown away. The ingredients were cut into small pieces and dried properly. After drying, the *Dravyas* were coarsely ground (*Yavkoota*) and mixed properly. Then, packing was done using air-tight plastic packets with labelling at Charaka pharmacy of RGGPG Ayurvedic College and Hospital, Paprola, Distt. Kangra (H.P.) vide B.No.24/24, M.F.D 27/09/2024.

Subjects: 32 patients fulfilling diagnostic criteria of *Tundikeri* were registered from OPD/IPD of Deptt. of Shalakya Tantra, RGGPG Ayurvedic College & Hospital Paprola, 30 patients completed the trial.

Inclusion criteria

- Patients willing for the trial.
- Patients have been selected based on signs and symptoms of *Tundikeri* w.s.r. to Tonsillitis.
- Patients above 5 years of age have been selected.

Exclusion criteria

- Patients with complications of Tonsillitis.
- Patients suffering from Malignancy, Diabetic Mellitus, Hypertension.
- Immuno-compromised patients.
- Congenital deformity.
- Patients not willing to be registered for the trial.

Criteria for withdrawal

- Individual's noncompliance with treatment regimen.
- The individual himself/herself wants to withdraw from the trial.
- Individuals who develop any other co-morbidity during the trial period that requires immediate pharmacological intervention
- Adverse reaction to the trial drug.

Sampling technique

The selected patients were randomly placed and studied under the following 3 groups.

- **Group A -** 11 Patients were managed with *Kshara Gutika* (as *Pratisarana* in powder form).
- **Group B** – 10 Patients were managed with *Patoladi Kwatha*.
- **Group C-** 11 Patients were managed with *Kshara Gutika* (as *Pratisarana* in powder form) in combination with *Patoladi Kwatha*.

Drug dose

Kshara Gutika

- **In adults-** 2 gm TID (as *Pratisarana* in powder form)
- **In children-**30 mg /kg body weight TID (as *Pratisarana* in powder form)

Patoladi Kwatha

- **In adults-** 40 ml BD
- **In children -** 0.6 ml/kg body weight BD
- **Duration of Trial-** 15 days
- **Follow up-** Follow ups were done-on 7th day, 15th and day after 7 days of completion of trial.

Assessment Criteria- Assessment of the effect of the therapy was done based on the following subjective and objective criteria.

A. Subjective Criteria

Clinical features of *Tundikeri* (Tonsillitis) were considered under subjective criteria and grades / scores according to the severity for the purpose of assessment.

The effect of the treatment (results) was assessed regarding the clinical signs and Symptoms (on the basis of the grading and scoring system) and overall improvement.

The total effect of the therapy will be assessed considering the following criteria.

Clinical Assessment

The signs and symptoms were assessed by adopting a suitable scoring method. The details are as follows.

Criteria for assessment

Assessment of the clinical symptoms depending on the severity will be done according to the scoring pattern given below.

Size of tonsil	• Grade 0-tonsils within the tonsillar fossa • Grade 1-tonsils just outside of tonsillar fossa and occupy ≤33% of oropharyngeal width. • Grade 2 -tonsils occupy 34%-66% of the oropharyngeal width. • Grade 3 -tonsils occupy >66% of the oropharyngeal width.
Sore throat	• Grade 0- No pain in throat. • Grade 1- Pain on swallowing the saliva. • Grade 2- Painful, but cannot easily swallow the saliva.

	• Grade 3- Patient cannot swallow the saliva.
Dysphagia	• Grade 0-No difficulty in deglutition. • Grade 1-Mild pain during deglutition of hard particles. • Grade 2-Moderate pain during deglutition of semisolid food particles. • Grade 3-Severe pain during deglutition of even liquid food articles.
Congestion	• Grade 0- No congestion (normal) • Grade 1- congestion seen over the tonsils and uvula. • Grade 2- congestion seen over tonsils, uvula, and pharyngeal wall. • Grade 3-congestion with haemorrhage.
Follicles over the tonsils	• Grade 0- absent • Grade 1 - 1 to 5 follicles • Grade 2 - 5 to 10 follicles • Grade 3 - >10 follicles
Fever	• Grade 0 - Absent • Grade 1- 99^0 F - 100^0 F • Grade 2- 101^0 F - 103^0 F • Grade 3- >103^0 F
Halitosis	• Grade 0-No malodour • Grade 1-Slight malodour • Grade 2- Clear noticeable malodour • Grade 3-Strong malodour
Ear ache	• Grade 0 – Absent • Grade 1- Sometimes • Grade 2- Intermittent • Grade 3-Always
Debris over tonsil crypts	• Grade 0 - Absent • Grade 1- 1-2 mm • Grade 2- 3 -5 mm • Grade 3- >5 mm
Jugulodigastric lymphadenopathy	• Grade 0-Absent • Grade 1-Not visible but palpable • Grade 2-Visible and palpable but<4cm • Grade 3 -Visible and palpable >4cm
Dyspnoea	• Grade 0- Absent • Grade 1-Rarely • Grade 2-only on lying • Grade 3-many times, even in sitting
Change in voice	• Grade 0- No change • Grade 1- Slight change in voice • Grade 2- Difficulty in phonation • Grade 3- Unable to phonation

CRITERIA FOR OVERALL ASSESSMENT

Presentation of Data

The data collected and compiled from this clinical trial were sorted out and processed further by subjection to varied statistical methods and presented with tabular form in the following sequence.

- General observations viz. age, sex, religion, etc.
- Results of therapy were evaluated on the basis of improvement in signs and symptoms.

Statistical Analysis

The information gathered on the basis of above observations was subjected to statistical analysis in terms of mean (x), standard deviation (S.D.) and standard error

(SE.). "Paired Student's 't' test" was carried out at $p<0.05$, $p<0.01$ and $p<0.001$ levels.

The obtained results were interpreted as

Insignificant	p>0.05
Significant	p<0.05 & p < 0.01
Highly significant	p<0.001

The total effect of the therapy will be assessed considering the following criteria.

•	Complete remission	:	100% relief in the signs & symptoms.
•	Marked Improvement	:	76 -99% relief in the signs & symptoms.
•	Moderate Improvement	:	51-75% relief in the signs & symptoms.
•	Mild Improvement	:	25-50% relief in the signs & symptoms.
•	Unimproved	:	<25% relief in the signs and symptoms.

B. Objective criteria / Investigational criteria

- Haematological – CBC, ESR, FBS.

RESULTS

Total 32 patients were registered from Shalakya Tantra OPD/IPD of Rajiv Gandhi Govt. Post Graduate Ayurvedic College & Hospital, Paprola, Distt. Kangra(H.P.). Among all, 30 patients Completed the trial and 2 dropouts. 11 patients were registered in Group I in which 10 patients completed the study, 10 patients were registered in Group II, 11 Patients were registered in group III in which 10 patients completed the study.

Demographic profile

1. Maximum number of patients were of age group 5-15 years (31.25%), were females (62.5%), unmarried 53.12%, Hindu 100%, resident of rural area (81.25%), Student (53.13%), middle class (68.75%), education upto matric (31.25%), and vegetarian (75%).
2. The majority of the patients had no addiction (78.13%).
3. Majority of the patients had *Pittakaphaja Prakriti*(46.88%) with *Madhyama Satva* (56.25%), *Mandagni*(43.75%), 43.75% patients were of *Madhyama Sara*, 46.88% patients were of *Madhyama Samhanana*, and 53.13% patients were of *Madhyama Satmya*.

Clinical profile

1. The majority of patients, 53.12% patients were having acute condition of *Tundikeri*, and 25% of the patients were having Acute Parenchymatous tonsillitis. 100% Sore throat, dysphagia, and congestion.
2. The result indicated that among 3 groups, group III was more effective for the relief of sign and symptoms- Sore throat(88.88%), Dysphagia (82.60%), Size of tonsil(73..33%), Congestion (83.33%), Follicles over the tonsils(70%), Fever (100%), Halitosis (71.44%), Debris over tonsil crypts (85.71%), Earache (83.33%), Jugulodigastric lymphadenopathy (63.66%), and Change in voice (80%).

Table 3: The effect of therapy in Group I on the criteria assessed has been presented here as under.

Signs and symptoms	N	Mean		X (d) BT- AT	% age Relief	SD±	SE±	't'	P
		BT	AT						
Sore throat	10	1.400	0.500	0.900	64.28	0.316	0.1000	9	<0.001
Dysphagia	10	1.200	0.300	0.900	75	0.316	0.1000	9	<0.001
Size of tonsil	6	1.333	0.667	0.667	50	0.516	0.211	3.162	<0.05
Congestion	10	1.300	0.500	0.800	61.53	0.422	0.133	6	<0.001
Follicles over the tonsils	5	1.400	0.600	0.800	57.14	0.837	0.374	2.138	>0.05
Fever	2	1.500	0.500	1.00	66.66	0.000	0.000	(+inf)	<0.001
Halitosis	5	1.400	0.800	0.600	42.85	0.548	0.245	2.449	>0.05
Dyspnoea	-	-	-	-	-	-	-	-	-
Debris over tonsil crypts	4	1.250	0.500	0.750	60	0.500	0.250	3	>0.05
Ear ache	5	1.200	0.400	0.800	66.66	0.447	0.200	4	<0.05
Jugulodigastric lymphadenopathy	6	1.167	0.667	0.500	42.88	0.548	0.224	2.236	>0.05
Change in voice	2	1.000	0.500	0.500	50	0.707	0.500	1.000	>0.05

Table 4: The effect of therapy in Group II on the criteria assessed has been presented here as under.

Signs and symptoms	N	Mean		X (d) BT- AT	% age Relief	SD±	SE±	't'	P
		BT	AT						
Sore throat	10	1.500	0.300	1.200	80.00	0.422	0.133	9	<0.001
Dysphagia	10	1.700	0.400	1.300	76.47	0.483	0.153	8.510	<0.001
Size of tonsil	9	2.111	0.778	1.333	63.15	0.500	0.167	8.000	< 0.001
Congestion	10	1.800	0.400	1.400	77.77	0.516	0.163	8.573	<0.001
Follicles over the tonsils	3	1.000	0.333	0.667	66.66	0.577	0.333	2.000	>0.05
Fever	2	1.500	0.000	1.500	100	0.707	0.500	3.000	>0.05
Halitosis	8	1.125	0.500	0.625	55.55	0.518	0.183	3.416	<0.05
Dyspnoea	-	-	-	-	-	-	-	-	-
Debris over tonsil crypts	5	1.000	0.200	0.800	80	0.447	0.200	4	<0.05
Ear ache	7	1.143	0.286	0.857	75	0.378	0.143	6	<0.001
Jugulodigastric lymphadenopathy	8	1.125	0.500	0.625	55.55	0.518	0.183	3.416	<0.05
Change in voice	3	1.000	0.333	0.667	66.66	0.577	0.333	2	>0.05

Table 5: The effect of therapy in Group III on the criteria assessed has been presented here as under.

Signs and symptoms	n	Mean		X (d) BT- AT	% age Relief	SD±	SE±	't'	P
		BT	AT						
Sore throat	10	1.800	0.200	1.600	88.88	0.516	0.163	9.798	<0.001
Dysphagia	10	2.300	0.400	1.900	82.60	0.568	0.180	10.585	<0.001
Size of tonsil	8	1.875	0.500	1.375	73.33	0.916	0.324	4.245	<0.05
Congestion	10	1.800	0.300	1.500	83.33	0.527	0.167	9	<0.001
Follicles over the tonsils	6	1.667	0.500	1.167	70	0.408	0.167	7	<0.001
Fever	3	1.667	0.000	1.667	100	0.577	0.333	5	<0.05
Halitosis	6	1.166	0.333	0.833	71.44	0.408	0.167	5	<0.05
Dyspnoea	-	-	-	-	-	-	-	-	-
Debris over tonsil crypts	4	1.750	0.250	1.500	85.71	0.577	0.289	5.196	<0.05
Ear ache	6	2.000	0.333	1.667	83.33	0.516	0.211	7.906	<0.001
Jugulodigastric lymphadenopathy	9	1.222	0.444	0.778	63.66	0.441	0.147	5.292	<0.001
Change in voice	5	1.000	0.200	0.800	80	0.447	0.200	4.000	<0.05

Table 6: Effect of therapy on symptoms of group-I, group-II and group-III.

N			Symptom	%age Relief			F		P		Remarks
Group I	Group II	Group III		Group I	Group II	Group III					
10	10	10	Sore Throat	64.28%	80.00%	88.88%	BT	1.000	0.387	p>0.05	NS
							AT	0.863	0.439	p>0.05	NS
10	10	10	Dysphagia	75%	76.47%	82.60%	BT	9.202	0.002	P<0.05	S
							AT	0.184	0.834	p>0.05	NS
6	9	8	Size of tonsil	50%	63.15%	73.33%	BT	2.727	0.106	p>0.05	NS
							AT	1.032	0.386	p>0.05	NS
10	10	10	Congestion	61.53%	77.77%	83.33%	BT	5.000	0.019	P<0.05	S
							AT	0.403	0.674	p>0.05	NS
5	3	6	Follicles over the tonsils	57.14%	66.66%	70%	BT	1.688	0.262	p>0.05	NS
							AT	0.150	0.864	p>0.05	NS
2	2	3	Fever	66.66%	100%	100%	BT	4.163	1.000	p>0.05	NS
							AT	1.000	0.500	p>0.05	NS
5	8	6	Halitosis	42.85%	55.55%	71.44%	BT	0.500	0.622	p>0.05	NS
							AT	0.857	0.456	p>0.05	NS
4	5	4	Debris over tonsil crypts	60%	80%	85.71%	BT	2.333	0.178	p>0.05	NS
							AT	0.273	0.770	p>0.05	NS
5	7	6	Ear ache	66.66%	75%	83.33%	BT	3.636	0.070	p>0.05	NS
							AT	0.427	0.665	p>0.05	NS
6	8	9	Jugulodigastric	42.88%	55.55%	63.66%	BT	0.241	0.789	p>0.05	NS

			Lymphadenopathy				AT	0.353	0.710	p>0.05	NS
2	3	5	Change in voice	50%	66.66%	80%	BT	+inf	<0.001	P<0.001	HS
							AT	3.120	1.000	p>0.05	NS

Table 7: Overall Effect of Therapy.

Result	Group I		Group II		Group III	
	No.of patients	%age	No.of patients	%age	No.of patients	%age
Cured	1	10%	1	10%	2	20%
Markedly Improved	2	20%	5	50%	5	50%
Moderately Improved	4	40%	3	30%	3	30%
Mildly Improved	3	30%	1	10%	-	-
Unchanged	-	-	-	-	-	-

DISCUSSION

According to *Acharya Sushruta*, symptoms like swelling (*Shopha*), pain (*Shula*), pricking sensation (*Toda*), burning (*Daha*), and suppuration (*Prapaka*) are seen in *Tundikeri*, which are similar to acute tonsillitis signs such as enlarged tonsils, pain, and pus formation.

Sushruta also describes *Hanusandhi* as the anatomical location of the tonsils, and *Acharya Vagbhata* identifies it as *Hanusandhyasira*, suggesting there are two tonsils present.

Modern texts describe the palatine tonsils as paired lymphoid masses located on either side of the oropharynx. Ayurvedic references like *Karpasiphala*(tonsillar swelling), *Picchhil Srava* (discharge) from crypts, *Mandaruka* (sore throat), and *Kathinashopha* (hard swelling) parallel modern symptoms of tonsillitis.

From above discussion we can conclude that the symptoms mentioned in the ayurvedic texts are same as that of tonsilitis.

Demographic Profile

In the present trial, 32 patients were registered.The highest incidence 31.25%(10) patients, were observed in the 5-15 years age group. The remaining 22 patients were distributed across the 16-25 years (21.88%), 36-45 years (18.75%), 26-35% (15.62%), and >45years (12.50%). Classical Ayurvedic texts describe *Tundikeri* (tonsillitis) as a condition predominantly involving *Kapha Dosha*, which is dominant during *Balavastha* (childhood) — generally up to 30 years of age.[5] Modern medical science also supports this, stating that tonsillitis is more common in children and young adults, and is rarely seen beyond the age of 50. Majority of the patients, 62.5% were female and 37.5% were male. The data show female dominance in tonsillitis. Hormonal fluctuations in females may impact immune responses, making them more susceptible to infections. While females mostly remain inside the home. So, they also use food frequently that may lead to *Adhyasana*, which lowers the *Agni* and produces *Kapharaktadosha*, and lastly produces *Kapha-Raktadominance* disease *Tundikeri*. Whereas males are more prone to exposure to external pathogens as they remain outside the home for a long time and may sometimes follow *Apathya*, which lowers the *Agni*. They also have an addiction to certain things that aggravate the recurrence of the disease. 53.12% patients were unmarried, and 46.88% were married. This distribution highlights two key points: firstly, that the condition predominantly affects individuals in the younger age group, and secondly, that it is more prevalent among the unmarried population, particularly those under the age of 25. 81.25% patients were from rural areas and 18.75% were from urban areas. The majority from rural areas show that the disease mostly occurs in people who live in unhygienic conditions. Moreover, over studies are also done in rural areas.

Majority were Hindu, i.e., 100%. Nothing can be drawn from this observation; it could merely be due to a Hindu-dominant area. 53.13% were students, followed by 25% housewives, 12.5% with Govt. job, and 9.37% were self-employed. In school-going students, the habit of taking *Apathyas* more and they take uncovered, unhygienic food, which further aggravates the disease occurrence, and students also have *Kaphadosha* dominance, so the percentage is high in students. Majority of the patients were from the middle class, i.e., 68.75% with the remaining 25% from the lower class, 6.25% from the upper class. Middle-class economic status may be due to the effect of the area from where patients were drawn; no other specific clue can be gained.

Majority of the patients were matriculate i.e., 31.25% with the remaining 28.13% graduate, 25% primary, and 15.62% postgraduate. This signifies that the disease starts in the young ones. Majority of them were Vegetarian i.e., 75% followed by 25% with a Mixed diet. This could be attributed to certain patterns observed in vegetarian food habits, such as excess intake of *Guru*, *Snigdha*, *Abhishyandi Ahara*, which can increase *Kapha Dosha* and impair *Agni*, which contribute to the development of *Ama* and subsequent inflammation in the tonsillar region. Also, vegetarian diets often lack adequate spices or digestive stimulants, leading to poor *Ama Pachana*, which in turn promotes *Kapha Pitta Dushti* seen in *Tundikeri*. Majority of them were students and had no addiction, i.e. 78.13% followed by Tea/ coffee addiction, i.e., 12.5%, 6.25% were addicted to smoking, and 3.12% were addicted to alcohol. 46.88% patients had *Pittakaphaja Prakriti*, with the remaining

31.25% *Vatakaphaja* 31.25% and *Vatapittaja* 21.87%. As the disease is *Kapha-Rakta* dominating, the person with a similar *Doshaja Prakriti* is more prone; moreover, this attacks people up to middle age. Maximum patients were having *Madhyama Satva* i.e. 56.35%, *Madhyama Sara* 48.75%, *Madhyama Samhanana* 46.88%, Madhyama Satmya 53.13%. Sara holds importance in the outcome of the disease, as during the acute attack, the patient may lose desires, and there is failure to carry out voluntary movements. Hence, people with Avara Satva may not improve in spite of all the needed management. Sara is the essence of Dhatus. In the present study, the majority of the patients were having Avarasara. Avarasara patients become prone to disease very often and cannot live a healthy life. Samahana is also a reflection of a healthy body, and Pravara Samhanana never gets diseased. Satmya for every Rasa is good for the survival of all the Dhatus inside the body and Avara and Madhyama Satmya, or one Rasa or a few Rasa Satmya, keep the body unhealthy and make it prone to pathogens. 43.75% patients had Mandagni, followed by 25% patients with Samagni, 18.75% patients with Vishamagni, and 12.5% patients with Tikshanagni. As the disease is Kapha-dominating, it results in Agnimandta,; moreover, Toda, Paka in the disease hamper the intake, and ultimately, Abhyaharana Shakti also falls down.

Clinical profile

Effect of therapy on symptoms of group-I, group-II and group-III.

1. In the sore throat, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was a percentage relief difference as group II gives 15.72% relief than group I and group III gives 8.88% more relief than group II and 24.60% more relief than group I. This shows that group III was more effective than group II and group I, and group II was effective than group I, signifying that group III was most effective among all in sore throat.
2. In Dysphagia, there was a statistically significant difference between group I Vs group II Vs group III at the level p<0.05. Although there was a percentage relief difference as group II gives 1.47% relief than group I, and group III gives 6.13% more relief than group II and 7.60% more relief than group I. This shows that group III was more effective than group II and group I, and group II was effective than group I, signifying that group III was most effective among all in dysphagia.
3. In the Size of tonsil, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was a percentage relief difference as group II gives 13.15% relief than group I, and group III gives 10.18% more relief than group II and 23.33% more relief than group I. This shows that group III is more effective than group II and group I, and group II was effective than group I, signifying that group III was most effective among all in size of tonsil.
4. In Congestion, there was a significant statistical difference between group I Vs group II, Vs group III at the level p<0.05. Although there was a percentage relief difference, as group II gives 16.23% relief than group I, and group III gives 5.56% more relief than group II and 21.79% more relief than group I. This shows that group III is more effective than group II and group I, and group II is effective than group I, signifying that group III was most effective among all in congestion.
5. In Follicles over the tonsils, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was a percentage relief difference as group II gives 9.52% relief than group I and group III gives 3.34% more relief than group II and 12.86% more relief than group I. This shows that group III was more effective than group II and group I, and group II is effective than group I, signifying that group III was most effective among all in follicles over the tonsils.
6. In Fever, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was percentage relief difference as both group II and group III gave 33.34% relief than group I, signifying that both group III and group II are equally effective among all groups in reducing fever than group I.
7. In Halitosis, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was a percentage relief difference as group II gives 12.7% relief than group I, and group III gives 15.89% more relief than group II and 28.59% more relief than group I. This shows that group III was more effective than group II and group I, and group II was effective than group I, signifying that group III was most effective among all in halitosis.
8. In Debris over tonsil crypts, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was a percentage relief difference, as group II gives 20% relief than group I and group III gives 5.71% more relief than group II and 25.71% more relief than group I. This shows that group III was more effective than group II and group I, and group II is effective than group I, signifying that group III is most effective among all in debris over tonsil crypts.
9. In earache, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was a percentage relief difference as group II gives 8.34% relief than group I, and group III gives 8.33% more relief than group II and 16.67% more relief than group I. This shows that group III was more effective than group II and group I, and group II was effective than group I, signifying that group III is most effective among all in treating earache.

10. In Jugulodigastric lymphadenopathy, there was an insignificant statistical difference between group I Vs group II Vs group III at the level p> 0.05. Although there was a percentage relief difference, as group II gives 12.67% relief than group I, and group III gives 8.11% more relief than group II and 20.78% more relief than group I. This shows that group III was more effective than group II and group I, and group II was effective than group I, signifying that group III was most effective among all in jugulodigastric lymphadenopathy.
11. In change in voice, there was a statistically highly significant difference between group I Vs group II Vs group III at the level p< 0.001. Although there was a percentage relief difference, as group II gives 16.66% relief than group I, and group III gives 13.34% more relief than group II and 30% more relief than group I. This shows that group III was more effective than group II and group I, and group II was effective than group I, signifying that group III is most effective among all in the change in voice.

Discussion on Overall effect of the therapy

In Group I, out of 10 patients 40% (4) showed Moderate Improvement followed by 30% (3) patients with MildlyImproved, 20% (2) with Markedly Improved and 10% (1) Cured.

In Group II, out of 10 patients 50% (5) showed Marked Improvement followed by 30% (3) Moderately Improved, 10% (1) with Mildly Improved and 10% (1) Cured.

In Group III, out of 10 patients 50% (5) showed Marked Improvement followed by 30% (3) patients with Moderately Improved and 20% (2) Cured.

Discussion on the mode of action of the trial drugs

In *Ayurveda, Chikitsa* essentially refers to the process of *Samprapti Vighatana*- the disruption of the disease process. The selection of drugs and formultions is based on their *Rasa*(taste),*Guna* (qualities), *Veerya*(potency), *Vipaka*(post-digestive effect), and *Prabhava*(specific action). In the pathogenesis(*Samprapti*) of *Tundikeri*, *Kapha Dosha* is considered the primary causative factor. Therefore, the drug should be selected in a manner that directly targets and pacifies vitiated *Kapha* to arrest the progression of the disease.

In the present study, the trial drugs Kshara Gutika[6] and the other one Patoladi Kwatha[7] were selected based on authentic classical references. These trial drugs have been selected in Tundikeri(Tonsillitis), as described in Ayurvedic texts, is predominantly a Kapha and Rakta disorder characterized by symptoms such as tonsillar swelling, enlargement, pricking pain, burning sensation, and suppuration. The ingredients of both formulations exhibit properties and pharmacological actions supportive of both preventive and curative aspects in the management of Tundikeri.

1. *Kshara Gutika-*

Kshara Gutika, described in Chakradutta, is indicated in *Kantha Rogas* and is effective in *Tundikeri.* It possesses *Deepaniya* and *Ama-Pachana* properties, enhancing *Agni* and reducing *Ama.* The formulation pacifies *Kapha-Pitta*, reduces tonsillar hypertrophy through *Lekhanya* action, and exhibits *Shothahara* and *Vedanahara* effects to relieve inflammation and pain. Its *Krimighna* property controls microbial growth, while *Shirovirechana* action helps eliminate *Doshas* from the upper respiratory tract.

Probable mode of action according to *Rasapanchaka* of *Kshara Gutika*

- The formulation is dominated by *Katu Rasa* (52.40%) and *Katu Vipaka* (61.54%), imparting *Deepana, Lekhana*, and *Kapha-Nashaka* effects. *Laghu Guna* (35.50%) aids digestion and reduces *Kapha*-related heaviness and congestion. A high proportion of *Ushna Veerya* (77%) makes it *Kapha-Vata Shamaka*, enhancing *Agni* and alleviating inflammation and mucus accumulation. *Kaphashamaka* action (46.42%) directly targets *Kapha*-dominant conditions such as tonsillitis.

2. Patoladi Kwatha

Patoladi Kwatha, described in Chakradutta, is useful in Tundikeri due to its Kapha-Pitta Shamaka, Shothahara, Krimighna, Vishaghna, Vedanahara, and Rakta Prasadana actions. It digests Ama, reduces tonsillar inflammation and infection, purifies blood, relieves pain, enhances immunity (Rasayana), and helps prevent recurrence through mild Anulomana/Rechana effects.

Probable mode of action according to *Rasapanchaka* of *Patoladi Kwatha*

The formulation predominantly exhibits *Tikta Rasa* (40.91%), imparting detoxifying and anti-inflammatory effects beneficial in *Kapha-Pitta* disorders like tonsillitis. *Laghu* and *Ruksha Guna* (35.72%) support *Kapha* pacification and enhance *Agni*. A high proportion of *Ushna Veerya* (75%) indicates strong *Kapha-Vata*–reducing and metabolism-enhancing action. *Madhura* and *Katu Vipaka* (50%) contribute to *Dosha* balance, digestion, and elimination, while *Kaphashamaka Doshakarma* (40%) directly addresses *Kapha* dominance in tonsillitis.

Probable mode of action according to modern point of view.

1. *Kshara Gutika*

Kṣhara Gutika is a polyherbo-mineral formulation containing *Pippali, Chavya, Chitraka, Shunthi, Talisha Patra, Ela, Maricha, Twaka, Palasha Kṣhara, Muṣkaka Kṣhara, Yavakṣhara*,, and *Guḍa*, acting at multiple levels in *Tundikeri*. It exhibits anti-inflammatory and analgesic effects to reduce tonsillar edema and throat pain, and antimicrobial action to control bacterial infection. Its mucolytic and expectorant properties clear *Kapha* accumulation in the oropharynx. The formulation possesses *Deepana-Pachana* and *Ama-Pachana* actions, improving digestion and reducing the underlying

pathology. Additionally, its immunomodulatory *(Rasayana)* effect enhances disease resistance, while *Srotoshodhana* and blood-purifying actions help prevent chronic inflammation and recurrence.

2. *Patoladi Kwatha*

Patoladi Kwatha exerts multi-dimensional therapeutic effects in tonsillitis through its anti-inflammatory action, reducing tonsillar edema and throat pain, and antimicrobial–antiviral activity that controls infection. Its immunomodulatory *(Rasayana)* effect enhances immune response and prevents recurrence. The formulation provides antipyretic and analgesic relief in acute stages, while expectorant and mucolytic actions clear *Kapha* accumulation in the throat. *Deepana–Ama-Pachana* properties address the underlying pathology, and antioxidant, tissue-protective effects support healing of inflamed tonsillar tissue.

These formulations help in alleviating the signs and symptoms of the disease due to their *Kapha-Rakta hara* actions. *Kshara Gutika* comprises drugs having 46.42% *Kaphashamaka* properties and 7.16% *Pittashamaka* properties, and *Patoladi Kwatha* comprises drugs having 40% *Kaphashamaka* properties and 30% *Pittashamaka* properties.

Furthermore, the drugs in the formulations were having Deepana, Pachana, Vishghana, Jwarghana, Shothahara, Vednahara, Shodhana, Raktaprasadana, and Rasayana properties by which the drug acted on this disease.

Try to find the correlation of *Tundikeri* with Tonsillitis.

Causative factors responsible for *Tundikeri* disease.

As excessive consumption of meat (especially fish, pig, and buffalo), Urad dal, curd, milk, Shukta, Ikshurasa, and Phanita. Contributing lifestyle factors include sleeping in a prone position, poor oral hygiene, and inappropriate practices like Dhoompana, Vamana, and Siravyadha. These collectively lead to the manifestation of Tundikeri. There is no specific Nidana mentioned for the disease Tundikeri in either of the Samhitas. However, there are references to the factors responsible for the causation of disease in Mukha as a whole.

Modern medicine identifies causes of tonsillitis such as upper respiratory tract infections, sinusitis, low immunity, exposure to infections, poor oral hygiene, and environmental triggers like cold weather or foreign bodies in the throat. These etiologies align closely with those of *Tundikeri.*

Signs and Symptoms

According to *Acharya Sushruta*, symptoms like swelling (*Shopha*), pain (*Shula*), pricking sensation (*Toda*), burning (*Daha*), and suppuration (*Prapaka*) are seen in *Tundikeri*, which are similar to acute tonsillitis signs such as enlarged tonsils, pain, and pus formation.

Sushruta also describes *Hanusandhi* as the anatomical location of the tonsils, and *Acharya Vagbhata* identifies it as *Hanusandhyasira*, suggesting there are two tonsils present.

Modern texts describe the palatine tonsils as paired lymphoid masses located on either side of the oropharynx. Ayurvedic references like *Karpasiphala* (tonsillar swelling), *Picchhil Srava* (discharge) from crypts, *Mandaruka* (sore throat), and *Kathinashopha* (hard swelling) parallel modern symptoms of tonsillitis.

Treatment

According to *Ayurveda*, *Tundikeri* cannot be completely managed with only *Shamana Chikitsa* (palliative therapy). *Acharya Sushruta* recommends *Shastra Chikitsa* (surgical approach) like *Galashundi* in *Tundikeri*.

Modern management advises tonsillectomy when medical treatment fails. Post-surgical complications of *Tundikeri* (like after tonsillectomy) may include bleeding or, in rare cases, death.

Sadhya-Asadhyata

Tundikeri is a *Sadhyaroga*, similar to tonsillitis in modern medicine.

CONCLUSION

After thorough analysis and interpretation of the collected data, the following conclusions can be drawn:

1. Due to similarities in clinical features and management, the disease *Tundikeri* can be correlated with Tonsillitis.
2. This disease is more common in children and adults.
3. Drugs used in all groups are effective, but among the three groups, *Kshara Gutika* in combination with *Patoladi Kwatha* is very effective.
4. The drugs diminish the various signs and symptoms of tonsillitis, like sore throat, dysphagia, congestion over the tonsils and pillars, and also decrease the size of the tonsils.
5. Excellent result was observed in group II to decrease symptoms of sore throat, congestion, dysphagia, size of the tonsils as compared to group I.
6. The result was not satisfactory in group I for follicles over the tonsils and change in voice, as those are in groups II and III. It could be effective if used for a longer duration of therapy.
7. During the trial there was no untoward effect of the drug was found.

REFERENCES

1. Sushruta Samhita, edited with Ayurveda Tattva Sandipika by Kaviraja Ambikadutta Shastri, Chaukambha Sanskrit Sansthan, Sutra Sthana Adhyaya 1/10, Pg. No. 5.
2. Sushruta Samhita, edited with Ayurveda Tattva Sandipika by Kaviraja Ambikadutta Shastri,

Chaukambha Sanskrit Sansthan, Nidana Sthana Adhyaya 16/42, Pg. No. 387.
3. Ashtanga Hrdaya of Vagbhata, Dr Anna Moreswar kunte and Krsna Ramchandra Sastri Navre, Chaukhamba Surbharati Prakashan, Varanasi, Uttara Sthana Adhyaya 21/47 Pg no.849.
4. Sushruta Samhita, edited with Ayurveda Tattva Sandipika by Kaviraja Ambikadutta Shastri, Chaukambha Sanskrit Sansthan, Chikitsa Sthana Adhyaya 22/57, Pg. No. 126.
5. Charaka Samhita by Pandita Kashinatha Sashtri and Dr. Gorakha Natha Chaturvedi, Chaukhamba Bharati Academy, Vimana Sthana Adhyaya 8/122, Pg. No. 782.
6. Chakradutta Vyakhyakara Dr. Indradev Tripathi, Chaukhamba Sanskrit Sansthana Varanasi, Adhyaya 56/4(22-23): Pg no. 333.
7. Chakradutta Vyakhyakara Dr. Indradev Tripathi, Chaukhamba Sanskrit Sansthana Varanasi, Adhyaya 56/4(36): Pg no. 334.