

# The Study Of Efficacy Of Oral Khadiradi Vati In Tundikeri W.R.T Acute Tonsillitis

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#### **ABSTRACT**

Intoduction: The inflammatory condition of tonsil is known as Tonsillitis. Multifocal aetiology that combines together to lower the immunity of the body and this in turn causes Acute Tonsillitis. Acute Tonsillitis can be compared with Tundikeri as there is marked resemblance in their symptoms. Different medical faculties with various therapies have tried in this disease with limited success or time bound relief. ENT specialist recommends tonsillectomy for recurrent attacks of tonsillitis but it has less detrimental effect on the local IgA response in the nasopharyngeal fluid. The former available conservative treatments are antimicrobials, analgesics, and anti-inflammatory drugs used to treat this disease, which accounts for large proportion of health care cost. Besides this, above drug also have limitations and side effects. The increasing refractory nature of infection caused by recently appearing drug resistant bacteria is a particular major clinical problem and to overcome above limitations and side effects it becomes necessary to elucidate another safe, economical and cheap therapy to treat tonsillitis and give better results, so a lot of can be done to support and attain tonsillar health naturally through the traditional way. Khadiradi Vati (Gutika) is an ayurvedic herbal remedy used for mouth ulcer, pharyngitis (sore throat) and other diseases of teeth, gums, tongue and throat. Khadiradi vati acts as an oral anti-septic anti-inflammatory, astringent & expectorant. Therefore, it is beneficial especially in sore throat & tonsillitis or infections of tonsils.

**Material And Methods:** Total 60 patients were randomly selected having age between 10-60 yrs and was divided into 2 equal groups. Trial group were given oral khadiradi vati thrice a day While control group were given yashtimadhu vati thrice day. Appropriate statistical test is applied to evaluate the effect of khadiradi vati in Tundikeri w.r.t. acute tonsillitis.

Results And Discussion: Khadiradi Vati has Deepan, Pachan, Swedan, Vilayan properties, which in effect causes Kapha Shaman. Yashtimadhu Vati in control group which is a proven antimicrobial anti-inflammatory drug. Culture and sensitivity of throat swab of patients was done and it observed that Khadiradi vati has antimicrobial property. Oral Khadiradi vati is having Katu Rasa, Ushna Veerya, Tikshna Ushna Guna. It helps in the radical removal of toxic substances from the body. They cause the separation of the matters obstructing the Strotas and dialate them. Above properties of Khadiradi vati results in Amashaya Gata Kapha Dosha Shamana and also rejuvenate Rakta Dhatu, so Samprapti Bhang of Tundikeri Vyadhi Occurs resulting in Shamana of vyadhi lakshanas hence effective in Tundikeri.

**Conclusion:** Oral Khadiradi Vati is effective than control group in Tundikeri. It is safe, cost effective and easy procedure to perform. It decreases severity of throat infection. Hence the role of drug in this disease is proved.

#### 1. INTRODUCTION

Ayurveda is one of the most ancient systems of life, health and cure, deals with both the preventive and curative aspects of life in a more comprehensive way. Ayurveda has described tonsillitis as mainly Kapha Raktaj disease<sup>[1]</sup>. Tundikeri is one of the Talugatroga<sup>[2]</sup> described by Acharya Sushruta which can be compared with Acute Tonsillitis of modern medicine.

Tundikeri refers to the disease that occurs in the region of mouth. It is defined as "Tundikeri karpasyam vanakarpasiphalam" which means Tundikeri resembles cotton fruit.[3]

Children have a higher prevalence between 4 and 8 years old and young adults between the ages of 15 and 25<sup>[4]</sup> are regularly affected by Acute Tonsillitis but it can affect any age group. About 1.3% of OPD visits are related to Tonsillitis<sup>[5]</sup>, a common condition characterized by inflammation of the Tonsils. ENT specialists recommend tonsillectomy for recurrent attacks of tonsillitis but it has less detrimental effect on the local IgA response in the nasopharyngeal fluid. It can occur as acute or chronic. Refrigerated items, cold beverages, poor hygiene can make tonsillitis even worse, if left untreated it can lead to various complications like choking spells at night, acute otitis media, peritonsillar abscess, parapharyngeal abscess, tonsilloliths, rheumatic fever<sup>[6]</sup>.

Here we are making this little effort, based on the knowledge already revealed by our Acharyas by selecting the topic "To study the efficacy of oral khadiradi vati in comparison with yashtimadhu vati in Gilayu w.r.t. Acute Tonsillitis. Khadiradi Vati (Gutika)<sup>[7]</sup> is an ayurvedic and herbal remedy used for mouth ulcer, pharyngitis (sore throat) and other diseases of teeth, gums, tongue and throat. Khadiradi vati acts as oral anti-septic, anti-inflammatory astringent & expectorant. Therefore, it is beneficial especially in sore throat & tonsillitis or infections of tonsils.

#### AIM

"Comparative study of efficacy of Khadiradi vati & Yashtimadhu vati in Tundikeri w.r.t. to Acute Tonsillitis."

## **OBJECTIVES:**

- To find Ayurvedic remedy for Acute Tonsillitis.
- To reduce tendency & severity of throat infections.
- To assess the effect of oral Khadiradi vati in Acute Tonsillitis.

## Samprapti

Excessive intake of Madhura, Amla, Lavana Rasa dominant Ahara, Snigdha, Abhishyandi Ahara, Improper oral hygiene, or sleeping in prone position causes Agnimandya, Kaphadosha Prakopa, and Rakta Dushti. This leads to Sthana Sanshraya of Doshas in Talu or Kantha Pradesha and lead to Tundikeri roga.

Clinical features of Tundikeri<sup>[8],[9]</sup>

- Toda (Pricking Pain)
- Daah (Burning Sensation)
- Paak (Suppuration)
- Shofa (Inflammation)
- · Sore throat
- Enlarged tender lymph nodes

## 2. MATERIALS & METHODS

# **Study Design**

Comparative study with pre and post-test design

#### Patients

The patients with classical signs and symptoms were randomly selected by preset inclusion and exclusion criteria from the OPD and IPD of Shalakyatantra Department of Siddhakala Ayurved Mahavidyalaya, Sangamner.

#### Trial Drug

The ingredients of Khadiradi Vati were purchased from local market. The raw drugs were Khadir, Javitri, Kankola, Karpoor and Gairika.

All the herbs were identified, authentified and good manufacturing practice followed for preparation in the department of Rasashastra & Bhaishajya Kalpana

## Diagnostic Criteria

Diagnosis was established on the basis of history, symptoms mentioned in classical texts and by objective parameters/investigations mentioned in contemporary texts.

#### **Inclusion criteria:**

Patients fulfilling the diagnostic criteria of Tundikeri

Ø 10 to 50 years of age group

Ø Chronicity less than 3 years

## **Exclusive Criteria:**

- Patients aged below 10 years and above 60 years were excluded
- Pregnant and lactating women
- Patient with Autoimmune disorders
- Associated with Peritonsillar abscess, Tonsillar cyst, Tonsillolith, Anaemia.
- Specific systemic infections like Tuberculosis, Leprosy and other systemic diseases like Hypertension, Diabetes mellitus

## **Treatment Groups**

In experimental group Oral Khadiradi vati two tabs thrice a day were given and in control group Yashtimadhu vati two tabs thrice a day were given. Patients were asked for follow up: 3<sup>rd</sup>, 5<sup>th</sup> and 7<sup>th</sup> day.

#### Criteria of Assessment

The disease assessment and the response of the therapy were assessed based on following parameters. The parameters & overall effect of the therapy were subjected for self-grading scores

## Parameters (assesement criteria) Table

#### 1. Tonsillar inflammation:

Sr. no	Criteria	score	Grade
1.	Enlarged, congested with follicles / pus spots	+++	Severe
2.	Enlarged, Congested	++	Moderate
3.	Congested	+	Mild
4.	No congestion	0	Absent

## 2. Jugular-Digastrics lymphadenitis:

Sr. no.	Criteria	Score	Grade
1.	Enlarged-Tender	+++	Severe
2.	Enlarged-Non tender	++	Moderate
3.	Just palpable	+	Mild
4	Not palpabe	0	Absent

## 3. Throat pain:

Sr. no	Criteria	Score	Grade
1.	Pain during rest	+++	Severe
2.	Pain during deglutition	++	Moderate
3.	Mild pain on presenting tonsils	+	Mild
4.	No throat pain	0	Absent

## 4. Fever:

Sr.no.	Criteria	score	Grade
1.	103°F - 105°F	+++	Severe
2	100°F - <103°F	++	Moderate
3.	99°F - <100°F	+	Mild
4.	98°F - 99°F	0	Absent

Frequency distribution of Patients according to efficacy of the treatment given below along with bar graph.

Efficacy (%)	Experimental group (%)	Control group (%)
Excellent	73.23	51.64
Moderate	26.77	48.36
Mild	0	0
Ineffective	0	0

## Ranks

	Groups	N	Mean Rank	Sum of Ranks
	Experimental Group	30	42.94	1954.00
Tonsillar Inflammation	Control Group	30	25.71	742.00
	Total	60		
	Experimental Group	30	47.92	2381.00
Throat Pain	Control Group	30	27.06	1047.00
	Total			
	Experimental Group	30	39.85	1648.50
Fever	Control Group	30	26.66	749.00
	Total	60		
	Experimental Group	30	54.94	2864.00
Lymphadenopathy	Control Group	30	24.33	883.00
	Total	60		

# 3. RESULTS

The factors Decrease in Tonsillar Inflammation scores, Decrease in Fever scores, Decrease in Lymphadenopathy scores are greater in Experimental Group as compared to Control Group on an average. There is significant difference in Experimental Group & Control Group on an average for all factors considered.

Tonsillar Inflammation		Throat Pain		Fever		Lymphadenopathy	
Follow ups	Mean Rank	Follow ups	Mean Rank	Hollow uns	Mean Rank	Follow ups	Mean Rank
O <sup>th</sup>	3.98	0th	3.74	$0^{ m th}$	3.95	$0^{ ext{th}}$	3.92
$3^{\rm rd}$	2.67	3rd	2.17	3 <sup>rd</sup>	2.26	$3^{\mathrm{rd}}$	2.19
5 <sup>th</sup>	1.01	5th	1.17	5 <sup>th</sup>	1.73	5 <sup>th</sup>	1.42
$7^{\mathrm{th}}$	0.92	7th	0.68	$7^{\text{th}}$	1.57	$7^{\text{th}}$	0.54

Tonsillar Inflammation		Throat Pain		Fever		Lymphadenopathy	
N	30	N	30	N	30	N	30
Chi- Square	95.43	Chi- Square	84.72	Chi- Square	71.04	Chi- Square	89.94
df	3	df	3	df	3	df	3
P Value	.000	P Value	.000	P Value	.000	P Value	.000
a. Friedman Test		a. Friedman Test		a. Friedman Test		a. Friedman Test	

Since p value < 0.05, the level of significance for all factors; there is strong evidence to reject the null hypothesis for each factor stated above.

There is significant difference between follow up scores in Experimental Group, on an average if factors Tonsillar Inflammation, Throat Pain, Fever scores, Lymphadenopathy are considered. Looking at the mean rank values, the scores are reduced after the treatment considerably if factors Tonsillar Inflammation, Throat Pain, Fever scores, Lymphadenopathy are considered.

#### 4. DISCUSSION

Tonsils are protective glands which are vital to the body and need to be saved. The role of tonsils that is immune competence, is become extremely important. Acharya Sushruta described the disease Tundikeri having Kapha Dosha predominance and vitiated Rakta Dhatu, we need the Kaphashamak Chikitsa in the management of Tundikeri. The ingredients of Khadiradi Vati are having Katu Rasa, Ushna Veerya, Tikshna, Ruksha, Sookshma Guna<sup>[10]</sup>. As per Acharya Vagbhata the substance which tastes katu is valuable in the Galroga. Hence it works as Kapha Shamak and Rakta Dhatu Shodhak. Ingredients in Khadiradi Vati has Deepan, Pachan, Swedan, Vilayan properties, which in effect causes Kapha Shaman.

Yashtimadhu Vati is used in control group which is proven antimicrobial anti-inflammatory drug.

In **Sex wise distribution of the patients** shows (76.7%) Female patients were having higher incidence of tonsillitis, probably due to more ingestion of food allergens like sour fruits, preservative added foods, drinks. It is common tradition in our Indian culture that women have more fasting and ignorance towards her routine diet leads to lower her immunity and become more prone to various infectious diseases like Tonsillitis.

In **Age wise distribution of the patients**, out of 30 patients 16.7%cases were found in age group 11-20 years in experimental group and in control group out of 30 patients 10% from age group 11 to 20 This may be due to the patients of this age group are more prone to catch infection or incidental selection.

In **Residence wise distribution of patients**, maximum number of patients i.e.73.3%out of 30 in experimental group were found from rural area. And in control group 83.30% out of 30 in control group in urban areas were taken.

In **Occupation wise distribution of patients** out of 60 patients student are more i.e. 33.3% total out of 60 patients. It may be due to patient are more prone to the infection in school, college, park and overcrowded areas.

### Probable mode of action of Khadiradi vati:-

Oral Khadiradi vati is having Katu Rasa, Ushna Veerya, Tikshna, Ushna Guna. Katu Rasa having properties like Mamsan Vilikhati i.e. corrodes the muscle tissue, Shonita Sanghat Bhinnati i.e. cleans the accumulation or other obstructions. Margan Vivrunoti i.e. cleans and dilates the passage and alleviates kapha Dosha and protects from excessive granulation in ulcer. The substance processing Katu Rasa also has Deepan and Pachan property. They help in the radical removal of toxic substances from the body. They cause the separation of the matters obstructing the Strotas and dialate them. It kills Krimi (micro-organisms). The Katu Rasa is having Lekhana property. It has properties like Ruksha, Ushna, Laghu and Sookshma Guna apart from this, it has Teekshna and Vishada properties being opposite to qualities of Kapha Dosha. Ushna Veerya, has properties like Dahan, Pachan, Swedan, Vilayan which in effect causes Kapha Shaman.

Above properties of Khadiradi vati results in Amashaya Gata Kapha Dosha Shamana and also rejuvenate Rakta Dhatu, so Samprapti Bhang of Tundikeri Vyadhi Occurs resulting Tundikeri Vyadhi Shamana. As per above discussion Khadiradi Vati may act in the management of Tundikeri.

## **CONCLUSION**

After statistical analysis, it is concluded that oral KHADIRADI VATI is effective than control group in Tundikeri. It is safe, cost effective and easy procedure to perform. It decreases severity of throat infection. Hence the role of drug in this disease is proved.

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