

Comparative Study of Shunthyaadi Yoga Kavala & Pratisarana In Tundikeri (Chronic Tonsillitis)

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Abstract

Tundikeri (Chronic Tonsillitis) is a common condition with 15.9% of prevalence in childhood & adolescent age group with high prevalence and repeated episodes. Recurrent attacks and incomplete treatment makes it chronic. It lacks in specific medical treatment and the surgical intervention is not suitable for all. In classics no single formulation is indicated specifically for Tundikeri. Various therapies like Nasya, Kavala, Gandusha, Pratisarana, Shastrakarma are explained in the context of Kanthagata Roga Chikitsa, can be tried in Tundikeri.

The study was aimed to compare the effect of Shunthyaadi Yoga Kavala and Pratisarana after the treatment and in sub-sequent follow-ups. It was studied in 2 groups Gr. A & B with 15 patients in each group. The pre and post treatment effect of the individual therapy and to compare them on various parameters, types of tonsillitis and even on recurrence rate in follow-up period of 3 months.

It was observed that, Kavalagraha (Gr. B) works better during and after the therapy in paranchyamatous tonsillitis and pharyngo-tonsillitis but with high recurrence rate. Pratisarana (Gr. A) is found more beneficial in follicular type of tonsillitis. It's effect is better in subsequent follow-ups than immediately after the therapy with very minimal recurrence rate.

Keywords: Tundikeri; Chronic tonsillitis; Shunthyaadi yoga; Kavala; Pratisarana.

Introduction

Tundikeri is a Talugata[1]/Kanthagata[2] Vyadhi characterized by hard swelling at the conjoining part of Hanu resembling the fruit of Karpasa associated with Kathina Shotha, Manda Ruk, Paka, Toda, etc.[3] The symptoms of Tundikeri resembles with Chronic Tonsillitis.

The prevalence of the disease is 15.9%⁴ & found more in the children and less frequent

in the aged.[5] In early childhood during infection the tonsils enlarge to meet this challenge but they should revert to their normal size when the infection and symptoms subside.[6] Due to recurrent attacks and incomplete treatment, tonsils fail to regain its normal shape and size. This may leads to several health hazards like recurrent upper respiratory tract infections, growth retardation, bronchial asthma, RHD, RF, SAEC, snoring and its related complications, etc.[7]

Looking into above facts there is a need of treatment which can prevent complications of the disease as well as reduces the recurrence effectively.

The Shunthyadi Yoga[8] was selected from Ashtanga Hridaya for this present clinical trial. This formulation is indicated in all types of Kanthagata Roga in the form of Kavalagraha and Pratisarana.[8]

Sushruta opines that the diseases which can be treated with Kavala can also be treated

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with Pratisarana.[9] Keeping this into consideration, the present study was planned to evaluate and compare the efficacy of Pratisarana and Kavala in the management of Tundikeri (Chronic Tonsillitis).

Aim & Objectives

Aim

- To compare the effect of Shunthyaadi Yoga Kavala and Pratisarana after the therapy and in sub-sequent follow-ups.

Objectives

- To evaluate the effect Shunthyadi Yoga Kavala in Tundikeri (Chronic tonsillitis)
- To evaluate the effect Shunthyadi Yoga Pratisarana in Tundikeri (Chronic tonsillitis)
- To evaluate the effect Shunthyadi Yoga Kavala & Pratisarana in Tundikeri (Chronic tonsillitis) during follow-up periods

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 K. L. E. Ayurveda Hospital, Shahapur, Belgaum.

Trail Drug

The ingredients of Shunthyadi Yoga were purchased from local market. The raw drugs were Triphala, Trikatu, Daruharidra, Vacha, Rasanjana, Patha, Tejini, Nimba, Gomutra, Yavakshara and Shukta.

All the herbs were identified, authenticated and good manufacturing practice followed for preparation in the department of Rasashastra & Bhaishajya Kalpana, SDM College of Ayurveda, Hassan.

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
- 10 to 50 years of age group
- Chronicity less than 3 years

Exclusion Criteria

- Associated with Peritonsillar abscess, Tonsillar cyst, Tonsillolith, Anaemia.
- Specific systemic infections like Tuberculosis, Leprosy and other systemic diseases like Hypertension, Diabetes mellitus

Laboratory Investigations

- Blood - Hb%, T.C., D.C., ESR, R.B.S. (If required for screening of Diabetes and systemic diseases purpose)

Treatment Groups

- *Group A* - 15 patients were subjected for Shunthyadi yoga Pratisarana
- *Group B* - 15 patients were subjected for Shunthyadi yoga Kavala

Group A - (Pratisarana)

Method of Drugs Preparation for Pratisarana

The Triphala, Trikatu, Daruharidra, Vacha, Rasanjana, Patha, Tejapatra and Nimba were

taken in equal quantity (100 gms each) added with 8 parts of water (6400 ml) for Kwatha preparation. The formulation is subjected for Kwathana and reduced to $\frac{1}{4}$ th (1600 ml) of its total quantity. The kwatha is filtered and filtrate is subjected for boiling along with 100 gms of Yavakshara, 100 ml each of Gomutra and Shukta on Mandagni till it turned to semisolid paste. This formulation is collected and stored in a cool and dry placed in an air tight glass bottle.

Procedure of Pratisarana

The patient was made to sit comfortably on the soft cushion chair. Tongue depressor was applied over the dorsum of posterior $\frac{1}{3}$ rd of tongue. Lignox 10% spray is used to reduce the sensitivity of Oro-pharynx and to prevent Gag reflex.

Cotton ball held in a long artery forceps gently rubbed over the anterior surface of the tonsils.

Shunthyadi Yoga Rasakriya was made into the paste form and applied gently over the anterior surface of the tonsils for 1 to 2 minute.

During procedure, the patient was asked to breathe comfortably (orally/nasally whichever is comfortable). Then the medicine is removed with a cotton ball held in long artery forceps. Then the patient is asked to rinse the oral cavity with luke warm water if needed.

Required quantity of the drug was taken and Pratisarana is done for 7 consecutive days before food in morning hours.

Group B - Kavalagraha

Method of Drugs Preparation for Kavala

Daily fresh drug was prepared for Kavala. 5 gms of each dry drugs, mixed with 8 parts of water (640 ml) and reduced to $\frac{1}{4}$ th to which 5 gms of Yavakshara, Shukta and 5 ml each of Gomutra were added. Approximately 150 ml of Kashaya was prepared for each patient per day.

Procedure of Kavalagraha

Patient was made to lie down comfortably. Mridu Mukhabhynaga was done with Moorcchita Tila taila followed with Mridu Sweda. The patient was asked to withhold sufficient quantity of medication in the oral cavity and advised to move the liquid comfortably in the oral cavity in such a way that it should reach the oropharynx. The procedure is continued till the Samyak Kavala Lakshana appears.

Approximately 150 ml of Kwatha was used for Kavala daily in morning hours before food for consecutive 7 days.

Study Duration, Follow-up & Recurrence

7 days of study with follow up for 60 days with the gap of 15 days. Reappearance of the symptoms within follow up period was considered as recurrence of the disease.

Method of Collection of Data

L. Criteria of Assessment

The disease assessment and the response of the therapy were assessed based on following subjective and objective parameters. The parameters & overall effect of the therapy were subjected for self-grading scores provided in appendix no. 01.

Subjective Parameters

01. Kathina shotha (Swelling)
02. Manda Ruk (Mild Pain)
03. Galoparodha (Obstructive lesions)
04. Asya Vairasya (Sore throat & Halitosis)

Objective Parameters

01. Pictorial presentation
02. Size of Tonsils
03. Ragatwa (Congestion)
04. Regression of Lymph Nodes

Table 1: Distribution of Patients Registered in Trial Groups were as Follows

Sl.	Trial Groups	Total Registered	Discontinued	Completed
01.	Group A	26	11	15
02.	Group B	21	06	15

Table 2: Data Related to Disease Evaluation Factors**Table 3: The Percentage of Improvement in Individual Symptoms after 7 Days of the Treatment and 4th Follow-up**

Sl.	Parameters	Improvement in percentage			
		Group A		Group B	
		AT	FU4	AT	FU4
01.	Reduction in Ruk (Pain)	100	94.11	100	83.33
02.	Reduction in Shotha (Size of swollen tonsils)	37.50	50.00	26.66	33.33
03.	Reduction in Ragatwa (Congestion)	73.68	89.47	100	78.26
04.	Reduction in Galoparodha (Dysphagia)	73.58	91.66	100	81.81
05.	Reduction in Halitosis	68.42	31.57	64.72	41.17
06.	Reduction in Jugulo-digastric lymphadenopathy	28.57	57.14	36.36	72.72

Table 4: The Overall Response of the Therapy

Sl.	Response	Number of patients	
		Group A	Group B
01.	No improvement	-	-
02.	Mild relief	-	-
03.	Moderate relief	12	04
04.	Marked relief	03	10
05.	Complete relief	-	01

M. Statistical Analysis

The obtained data was subjected for paired 't' test and 'p' value less than 0.05 is considered as statistically significance in this study.

Observation & Results

Statistically, both the groups has shown

significance at the level of <0.001 for the parameters - Ruk (Pain), Kathina Shotha (Size of swollen tonsil), Ragatwa (Congestion), Galoparodha and Halitosis. Where as in group A, Jugulodigastric Lymphadenopathy has shown the significance level of <0.1 and in group B it was <0.05 .

Discussion

Tundikeri

The various explanations given by the Nighantukara refers to the resemblance with fruit of a particular drug like Karpasaphala, Badara, Karkati, Karavellaka, etc. The nomenclature of the disease is based on the slimily and morphological appearance. In follicular tonsillitis, the crypts will be filled with pustules, resembling with Karpasaphala. In paranchyamtous tonsillitis it is characterized by gross hyperemia and resembles with Badara.

Functions of Tonsils

In classics, the function of tonsils is not found. The tonsil partakes in various immune and growth related functions. So, tonsils should be retained with conventional therapies before absolute indication of tonsillectomy and let tonsils to contribute in immunological and other functions.

Probable Correlation

Majority of the signs and symptoms of

Method of Pratisarana



Tonsillitis resemble with Tundikeri. The tonsillar surface is filled with pustules. (Follicles filled with pus) Classics have given simily with Vanakarpasa (The fruit of cotton with open crypts). Hence, classical explanation directs towards the follicular variety of tonsillitis.

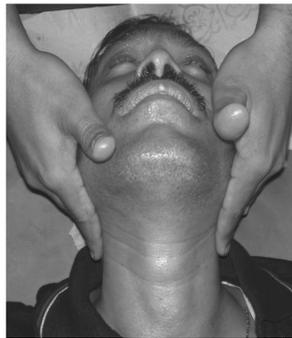
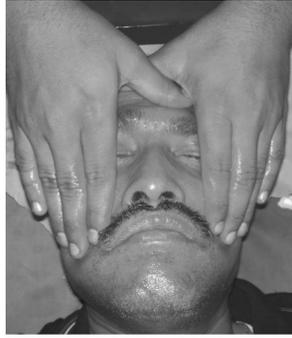
In classics the nature and consistency of Tundikeri is explained as Kathina Shotha (Hard swelling) which directs the attention towards the paranchyamatous tonsillitis characterized with gross oedematous hypertrophied tonsillar enlargement.

Manda ruk (Mild pain) is found in throat and it may refer to ear and triangles of the neck. In classics two types of Tundikeri are explained. This classification is based on characteristic pain in throat. The patient with Vata-Pittaja Tundikeri will be having severe pain, whereas Kapha-Raktaja type of Tundikeri will be having mild to moderate type of pain.

Instruments Used for Pratisarana



Mukha Abhyanga



Mukha Sweda



Kavalagraha



Kavalagraha

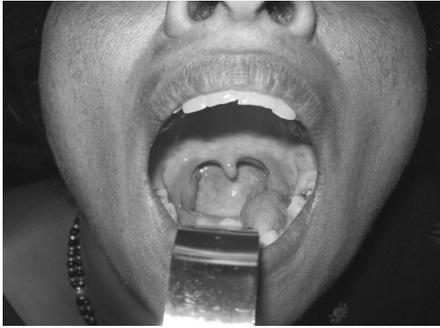


Result of the Therapy on Tonsils

Pre-Treatment



Post-Treatment



Yogaratanakaras explains Shoola and Toda variety of pain observed in Tundikeri, which denotes the chronic tonsillitis (Shoola) and acute pharyngo-tonsillitis (Toda).

The Nidana of Tundikeri mentioned in classics is intake of Abhishyandi, Sheeta, Kapha-Rakta Utkleshaka Dravyas. Similarly in predisposing factors of Tonsillitis it is mentioned as excess exposure to cold, dust and mist, etc.

The treatment principle explained for Tundikeri is Chhedana. Similarly tonsillectomy is advised in tonsillitis.

The explanation of the clinical features of Tundikeri given in classics emphasis 02 types of conditions. Viz. – Tonsillitis and Peritonsillar abscess. Because, the Paka/Prapaka word shows the tendency to undergo Paka. In Tonsillitis only small pustules are formed where as in peritonsillar abscess a big cystic swelling with suppuration is found which undergo paka in further consequences of the diseases.

In classics, Chhedana is advised for Tundikeri, whereas only Dalhana has advised Bhedana while commenting on the same context. The probable reason can be taken that, according to Dalhana, Tundikeri may resembles with Peritonsillar abscess, whereas others explanation resembles with tonsillitis where Bhedana cannot be done and even beneficial.

Overall Effect of Formulation

It is a combination of various drugs with multiple actions. Some of the properties and its effects are discussed as follows:

- *Ksharana*: This property helps in Ksharana of Vikrita Kapha and Mala accumulated in oral cavity, deposition of tartar, waste excreted in salivary secretions, etc and alleviates the halitosis and thus helps in reducing the symptoms.
- In group B, the halitosis is responded better than in group A. The probable reason could be – The Ksharana effect of medication could have removed the debris from surface of tonsils as well as deposited elsewhere in oral cavity.
- The patients with pharyngo-tonsillitis, cobble stone appearance and follicular appearance over the oropharynx responded well due to Ksharana property of the formulation.
- *Anti-biotics*: This property helps in arresting the further growth of bacteria and inflammatory processes. This also prevents the complications of the diseases.
- *Analgesics*: The ingredients of this formulation possess analgesic property which helps in alleviating the pain.
- *Antimicrobial*: The formulation contains bitter principles like Nimba, which acts as anti-microbial agent and reduces the growth of micro organisms like bacteria and viruses.
- *Anti-inflammatory*: The formulation contains the drugs like Trikatu, Tejini, Nimba, Patha, etc which are well known for their anti-inflammatory action.

Probable Mode of Action of Kavala

The probable mode of action of Kavala can be thought in following ways:

Action of Sthanika Snehana Swedana

Application of Sneha dravya, Mridu Abhyanga in Urdhwajatrugata followed with Mridu Swedana helps in reducing pain. The swedana helps to reduce inflammatory processes. The Jugulo-digastric

lymphadenopathy and throat pain in Kavala group reduced significantly within 2 to 3 days of treatment in all patients.

This procedure relaxes the muscles of neck and throat. Mridu Abhyanga and Swedana helps in dislodging the pathology. Another benefit of the Poorvakarma is – it gives strength to cheek and throat muscles to withhold the medication for longer duration.

Action of Heat

2 types of indirect heat application are done during Kavala (Viz. – Swedana during Poorvakarma and warmth of medication); this causes peripheral vasodilatation and increases blood circulation. The site becomes rich with WBC's which part takes in anti-inflammatory action of the drugs.

Probable Mode of Action of Pratisarana

The word meaning of Pratisarana is Gharshana or rubbing. In present clinical study the Pratisarana of Shunthyadi Yoga is performed over the tonsils. Its probable mode of action can be assumed as follows:

Action of Lignox 10%

It is a local anaesthetic agent, used to desensitize the mucosa of the oro-pharynx and palate temporarily. This prevents the gag reflex, pain of procedure and irritation due to medications. This facilitates the convenience of the procedure even in non-cooperative patients. Within 1 to 2 two hours of procedure patient regains the sensation and gustatory perception.

Action of Cotton Ball Rubbing over the Anterior Surface of Tonsils

The gentle rubbing of the cotton over the tonsils in case of follicular tonsillitis, ruptures the follicles and opens the crypts. It removes the sticky thick mucosal coating from the anterior surface of tonsils and facilitates the direct contact of tonsil tissue with the medication. This facilitates easy penetration

of the medicine into crypts to reach the action of medication till core of tonsils.

Action of the Medication over the Tonsillar Tissue

The medication contains the Kshareeya dravya, which acts as a chemical cauterizing agent over the tonsillar tissues. By the local application of Kshara it reduces the Vikrita Kapha. Due to Cchedana, Bhedana action of Kshara, it reduces the size of tonsils significantly.

The alkaline medication entered into core of tonsils cause chemical cauterization. Due to Cchedana, Bhedana, Ushna, Teekshna properties forms minute burns and there is a coagulation of muco-lymphoid tissues. This reduces the intracellular space and aggregates the lymphoid tissues. This intern stimulates fibrosis of tonsillar tissue and reduces the size of the tonsils.

Advantages of Pratisarana in the Management of Tundikeri

- No hospitalization
- Simple OPD basis procedure
- No need of general anesthesia
- No bleeding
- Less painful
- Cost effective
- Reduces the rate of recurrence of the symptoms
- Better acceptability and encouraging results

Conclusion

- The explanation of clinical features of Tundikeri in all classical texts collectively gives complete picture resembles with Tonsillitis and its various stages.
- The incidence of the disease is found more in pediatric and adolescent age groups.

- The incidence of the disease is found more in and around Hassan due to cold and rainy climatic conditions, dust, smoke, faulty food habits and daily regimens.
- Excess use of Guru, Abhishyandi, Vidahi, Picchila Guna Pradhana Nidana are more prone to cause Tundikeri.
- The effect of Shunthyadi Yoga Pratisarana is better in subsequent follow-up than immediately after the treatment with minimal recurrence.
- The Shunthyadi Yoga Pratisarana is found beneficial in chronic follicular type of tonsillitis.
- The effect of Shunthyadi Yoga Kavala is better in immediately after treatment but found to have greater rate of recurrence.
- The Shunthyadi Yoga Kavala is found beneficial in pharyngo-tonsillitis and paranchyamatous tonsillitis.
- Both Kavala and Pratisarana are found effective as a Dosha Pratyaniika Chikitsa in the management of Tundikeri immediately after the treatment.
- The hypothesis of Sushruta proved with significant statistical values obtained immediately after the treatment.
- Tundikeri manifested due systemic causes like sequel of other diseases, lowered body resistance requires both systemic and local therapies.

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