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Effectiveness of *Tankana Bhasma Kavala* in Tonsillitis

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ABSTRACT

Tonsillitis refers to inflammation of the pharyngeal tonsils (glands at the back of the throat, visible through the mouth). The clinical features of *Tundikeri* can be compared with tonsillitis. In acute tonsillitis there will be throat pain, dysphagia, malaise, anorexia, fever and body ache. The tonsils appear to be swollen and congested. Chronic tonsillitis may be a complication of acute tonsillitis. *Tankana Bhasma* (Borax -Na₂ B₄ 10H₂O) a commonly available alkali appreciated as *Kshara Raja* or *Kshara Shresta*. It has got *Katurasa*, *Ushna* and *Teekshna* properties. It is *Vrana Ropaka* as well as *Vatakapha Shamaka*. So, *Tankan Bhasma* has been used as treatment of Tonsillitis in the form of *Kavala*. This is an experimental study of 40 patients with symptom of tonsillitis like redness, dysphagia, pain, swelling, and white pus in tonsil and were treated with *Tankan Bhasma Kavala* twice a day after food. *Tankan Bhasma Kavala* have resulted in clinically improvement in the symptom of Tonsillitis. There was a improvement in Redness by 76.47%, Dysphagia by 72.22%, Swelling by 50%, White pus by 50%, Pain by 75% in the duration of 15 days.

Key words: *Tundikeri*, Tonsillitis, *Tankan Bhasma*, *Kavala*.

INTRODUCTION

The word *Tundikeri* is made up of two words i.e., *Tundi* and *Keri*. *Tundi* means mouth and *Keri* means location. So in total *Tundikeri* refers to the disease that occurs in the region of mouth. It is defined as "*Tundikeri Karpasyam Vanakarpasi-Phalm*" which means *Tundikeri* resembles *Vanakarpasika Phalam* (cotton fruit).^[1]

Tundikeri a *Talugata Vyadhi* is characterized by swelling in throat region (posterior palate), pricking

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pain and burning sensation. It has got the tendency of suppuration too.^[1] The clinical features of *Tundikeri* can be compared with tonsillitis. Tonsillitis refers to inflammation of the pharyngeal tonsils (glands at the back of the throat, visible through the mouth). The palatine tonsils and the nasopharyngeal tonsil are lymphoepithelial tissues located near the oropharynx and nasopharynx. In acute tonsillitis there will be throat pain, dysphagia, malaise, anorexia, fever and body ache. The tonsils appear to be swollen and congested. There may be oedema of uvula and soft palate along with enlarged and tender jugulo-digastric lymph nodes.^[2]

Chronic tonsillitis may be a complication of acute tonsillitis. Pathologically, micro abscesses walled off by fibrous tissue have been seen in the lymphoid follicles of the tonsils. There will be subclinical infections of tonsils without an acute attack. It mostly affects children and young adults.^[3] Tonsils fail to regain its normal shape and size with hypertrophy and hyperemia of pillars. It may lead to several complications like recurrent upper respiratory tract

infections, growth retardation, bronchial asthma, rheumatic heart disease, rheumatic fever, snoring etc.^[4]

In *Sushruta Samhita*^[5] and *Astanga Hridaya*,^[6] *Tundikeri* is characterized by *Sthoolashotha* (hard swelling), *Toda* (pricking type of pain), *Daha* (burning sensation), *Prapaki* (tend to undergo suppuration) and *Avarodha* (creates obstruction in throat for respiration and deglutition). In classics, treatment principle for *Tundikeri* is same that of *Galashundika*, but only the difference is *Bhedana Karma* is mentioned in place of *Chedana*.^[7] *Sushruta* praised the effect of *Kshara* so much that it can replace *Shastra Karma* since it does the *Chedana*, *Bhedana*, *Lekhana*, *Darana*, *Shothahara* and *Ropana Karmas* simultaneously without the help of the *Shastra*.

Tankana Bhasma (Borax - Na₂B₄O₁₀H₂O) a commonly available alkali appreciated as *Kshara Raja* or *Kshara Shrestha*. It has got *Katurasa*, *Ushna* and *Teekshna* properties. It is *Vrana Ropaka* as well as *Vatakapha Shamaka*.^[8]

Kawal is defined as a procedure in which medicine is taken in mouth and kept inside for two minutes spit out after gargling.

MATERIALS AND METHODS

Forty random patients diagnosed with tonsillitis (*Tundikeri*) were taken for the study from Ayurveda Campus Teaching Hospital.

Diagnostic criteria

- Pain
- Dysphagia
- Swelling
- Reddish discoloration
- White pus-filled spots on the tonsils

Inclusion criteria

- Clinically diagnosed patients of tonsillitis
- Any individual above 15yrs and below 45yrs of age

Exclusion criteria

- Patients with peritonsillar abscess, parapharyngeal abscess, tonsillar lith, tonsillar cyst etc.
- Acute conditions with fever and chills.
- Patients with complications of tonsillitis such as bronchial asthma, rheumatic heart disease, rheumatic fever etc.

Procedure

About 3 gms of purified *Tankan Bhasma* was dissolved in 50ml of luke warm water and asked patient to *Kaval* for 2 minutes twice a day after food for 15 days.

Internal intake of Tab. *Triphala Guggulu* was given to all the patients in the dose of 1tab TDS for 15 days.

Follow up was done on 15th day.

Assessment

Clinical assessment was done on 1st and 15th day, and the data obtained was analyze using t-test. Changed in symptoms before and after treatment were recorded. Grading was given for every clinical feature. The signs and symptoms were assessed by adopting following scoring method. The details are as follows. (Table 1)

Table 1: Grading of Clinical Feature

Clinical feature	Grading
Pain	0 : Nil 1 : Occasional 2 : During food intake 3 : Recurrent/several times per day 4 : Throughout the day
Redness	0 : No redness. 1 : Mild redness. 2 : Moderate redness. 3 : Severe redness. 4 : Extreme redness
Dysphagia	0 : Nil

	1 : Difficulty to consume solid food 2 : Difficulty to consume liquid food 3 : Difficulty to swallow saliva also
Swelling	0 : Nil 1 : 1-5 mm 2 : 6-10 mm 3 : 11-15 mm 4 : 16 mm and above
White pus-filled spots on the tonsils	0 : Nil 1 : 1-2 spots 2 : 3-4 spots 3 : 5 and above

RESULT

Result of this study showed that among 40 patients of tonsillitis included in study, male and female were 18 and 22 respectively. The age range of male and female were 21 to 44 years and 16 to 37 years respectively. (Table 1)

Table 1: Gender wise distributions of patients.

Gender	No of patient	Age range
Male	18	16- 37 years
Female	22	21- 44 years
Total	40	16- 44 years

Similarly, we found that most patients in this study were housewife (45%) followed by students (30%), business (15%) & service holders (10%) (Fig. 1)

Figure 1: Occupational distribution among patients.

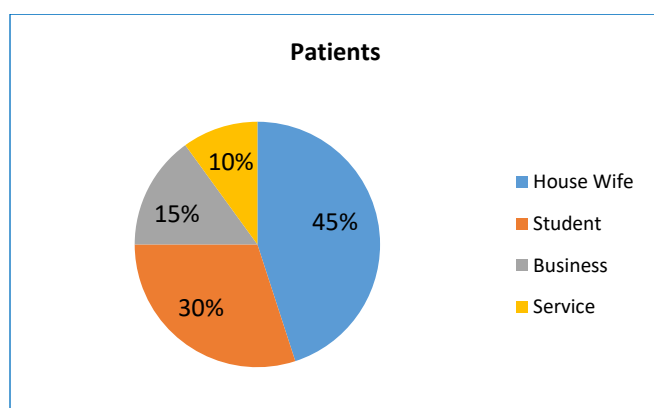


Table 2: Evaluation of effect of Tankana Bhasma Kavala in tonsilitis patients.

Symptom	Before treatment	After treatment (15 th day)	Relief %
Redness	1.7+/- 0.14	0.4+/- 0.10	76.47%
Dysphagia	1.8+/- 0.16	0.55+/-0.11	72.22%
Swelling	1.8+/- 0.16	0.9+/- 0.13	50%
White pus	1+/- 0.24	0.55+/-0.14	50%
Pain	2.8+/-0.18	0.7+/- 0.15	75%

Values are represented as Mean+/- SE

Result of the Table 2 showed that *Tankan Bhasma Kaval* have resulted in clinically improvement in the symptom of Tonsilitis. There was an improvement in Redness by 76.47%, Dysphagia by 72.22%, Swelling by 50%, White pus by 50%, Pain by 75% in the duration of 15 days.

DISCUSSION

Previously many Ayurveda research has shown significant result in tonsilitis (*Tundikeri*) with *Tankan Bhasma* use. It was mentioned in the article of Ravishankar AG and Mahesh TS *et al.* that *Tankan Bhasma* gargling showed a high efficacy in immediate reduction of pain, burning sensation and dysphagia, which was highly significant.^[11] In the article of Ravishankar *et al.* it was shown that tonsillitis is prevalent in life period of 8 to 20 years but in this study, it is observed that tonsilitis is found in any age group and any occupational group. Gender wise there was no much difference. In the article of *Anil Mangal et al.* it was proved that *Tankan Bhasma* has both bleaching and antiseptic properties which ultimately eradicate pathogens.^[12] In the article of Arun Raj GR *et al.* it is mentioned that like *Pravala Bhasma* and *Sphatika Bhasma*, *Tankan Bhasma* also can commonly use for the treatment of tonsilitis.^[13] In this study *Tankan Bhasma Kaval* showed a highly significant result in symptoms of Tonsilitis like Redness, Dysphagia and Pain. It may be due to *Tankan Bhasma* has a property of wound healing, anti-inflammatory, analgesis and

anti-septic. It helps in the removal of debris for the growth of bacteria's and also acts as *Vrana Ropaka*.

CONCLUSION

From the above study it is concluded that Tonsillitis is common in any age groups. Oral hygiene is best to prevent the Tonsillitis, so *Kavala* with the *Tankan Bhasma* had shown the marked relief in the symptom of the Tonsillitis. It could be cost effective and easy remedy for the management of Tonsillitis. Safety and efficacy of *Tankan Bhasma* has to be evaluated and revalidated by various animal and clinical studies. A well-structured standardized randomized placebo-controlled study is recommended.

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