

A CLINICAL EVALUATION OF SUNTYADI GANDUSHA IN SITADA W.S.R TO GINGIVITIS

P. Pundareekaksha Rao

Asst. Prof., Dept. of Shalakya Tantra, Ayurveda College, Coimbatore, Tamil Nadu, India

ABSTRACT

Sitada – Gingivitis is a worldwide problem since ancient era. In the disease, spontaneous bleeding without any injury or cause, associated with bad smell; gums will be very moist & soft and turns in to black in colour and destruction of gingiva due to vitiation of *Kapha* and *Raktha*. As per the statistics of Indian population, its incidence is 45% of the total disease (IDA). By the clinical picture *Sitada* can be compared with Gingivitis. Gingival bleeding is an early symptom of Gingivitis and its sequel is Periodontitis. As the modern management is not satisfactory, repeated scaling is harmful for teeth. So the present study was planned to evaluate the effect of *Gandusha* for treating of *Sitada* and in regaining of the oral hygiene. So for this disease “*Suntyadi churna*” for *Gandusha* are indicated by *Chakrapanidatta*. It contains *Sunti*, *Sarsapa*, *Amalaki*, *Hareetaki* and *Vibheetaki*. *Triphala* is a choice of drug for the management of the gum diseases. *Sunti* is also having Anti inflammatory, Antimicrobial, Antifungal, Antioxidant, Anti ulcer effect & *Sarsapa* is also to be claimed for Anti inflammatory, Antimicrobial, Antioxidant, Anti fungal properties. So, I selected these drugs and it is very cost effective and easily available. In present study total 30 patients were registered. *Suntyadi Gandusha* was found efficacious in relieving symptoms of *Sitada*.

Key words: *Sitada*, *Gingivitis*, *Suntyadi churna*, *Gandusha*

INTRODUCTION

Sitada is most prevalent disease due to intake of *Masha*, *Dadhi* and different type of *Kapha* and *Raktha dustikara ahara*, improper cleaning, habituation of pan and gutka chewing, Usage of different types of tooth paste and brushes, Irritation by using systemic drugs and cosmetics. It may be associated with hormonal imbalance in females. *Sitada* is characterized by spontaneous bleeding without any injury or cause, associated with bad smell; gums will be very moist & soft and turns in to black in colour. There will be destruction of gingiva occurs. These all clinical features occur due to vitiation of *Kapha* and *Raktha*. By the clinical picture it can be compared with Gingivitis because of its

nearest correlation of its signs and symptoms. In spite of many advances, the allopathic management of Gingivitis still remains unsatisfactory because of mechanical removal of causes by scaling or use of chemicals i.e. mouth wash, irrigations etc. Which are costly as time consuming and last treatment of choice is surgery, which is not completely safe in all cases. To combat the above problem, the required drugs which are having *Kasaya*, *Tikta*, *Katu rasa*, *Ushna veerya* and *Raktha stambhaka* properties. So for this disease “*Suntyadi churna*” for *Gandusha* is indicated by *Chakrapanidatta*. It contains *Sunti*, *Sarsapa*, *Amalaki*, *Hareetaki* and *Vibheetaki*. These drugs are having *deepana*, *pa-*

chana, vatanulomana, rasayana, krimighna property and anti inflammatory property also. So, I selected these drugs and it is very cost effective and easily available.

Aims and objectives:

1. To study the etiopathogenesis of *Sitad*-Gingivitis from *Ayurvedic* and modern point of view.
2. To evaluate the role of *Gandusha* with *Suntyadi kasaya* in *Sitada*.
3. To reduce the risk of infection by increasing awareness of oral hygiene.

Materials and methods:

1. **Patients:** Patients attending the O.P.D. & I.P.D. of department of *Shalakya* having classical symptomatology of *Sitada* (Gingivitis) were selected. A detailed clinical proforma was prepared for the study. Physical examinations of the patient & detailed history were taken.
2. **Drug:** *Suntyadi churna* in *yavakuta* form was prepared and given for the study.
3. **Inclusion criteria:**
 - Classical symptomatology of *Sitada* (Gingivitis) also who were taking allopathic medicine however their bleeding was not controlled were selected.
 - Age group between 21 – 70 year
 - Fulfillment of diagnostic Criteria.
4. **Diagnostic criteria:** Signs and symptoms of *Sitada* (Gingivitis)

Comparative symptom of *Sitada* and Gingivitis

1. *Akasmath Raktha srava* - Spontaneous bleeding
2. *Durgandha* - Foul smell / Halitosis
3. *Krishnavarna* - Bluish red discoloration of gingiva
4. *Prakleda* - Spongy gums
5. *Mruduta* - Smooth gums
6. *Danthamamsa seeryatha* -Gingival recession

7. *Dantamamsa pachana* - Suppuration of gingiva

5. Exclusion criteria:

1. Patients with marked pus discharge from gums.
2. Patients with Periodontal pocket.
3. Patients having any systemic disease which can cause Gingivitis.
4. Patients using any other systemic drugs which may alter the result of the study.

6. Investigations: Hematological examinations like Hb%, ESR, the microbial study of the gingival swab were done by bacterial culture, Oral P^H, Oral temperature.

7. Study design: Random sampling method was adopted for the selection of the patients. Informed consent was taken from the patient before including them in the trial.

Management of the Patients:

Grouping, drug dosage, duration and method of administration:

Grouping: 30 patients are taken as one group.

Duration: 21 days

Drug dosage & method of administration: *Suntyadi yavakuta churna* was prepared with equal quantity of *Sunti, Sarsapa, Ha-reetaki, Vibeethaki and Amalaki*.

6 g of *dravya* is added with 8 parts of the water, boiled and reduced to 1/4th part finally filtered and used at luke warm state.

Method of Gandusha: Patient was asked to sit in a chair comfortably. *Suntyadi Kwatha* was prepared as per the general *Kwatha* method and recorded P^H and temperature. Patient was advised to fill their oral cavity with lukewarm *Suntyadi Kwatha* after *Snehana* and *Swedana* and raises his face a little up. Asked to the patient to hold it till he gets *nasa and netra srava*. After spitting out the *Kwatha* advised rinse the mouth with luke warm plane water for

3 times. Instruction regarding special care of oral cavity was given.

Assessment of results: The effect of treatment was assessed subjectively by clinical observation on the basis of relief in signs and symptoms of the disease. The patients were examined at 7 days intervals, the progress are clinically recorded.

The cases are grouped into three categories depending upon the response of the treatment.

1. Good response – $\geq 75\%$ relief to 99% relief
2. Moderate response – $\geq 50\%$ up to 75% relief
3. Poor response – less than 50% of Signs & Symptoms relieved.

Observations and results:

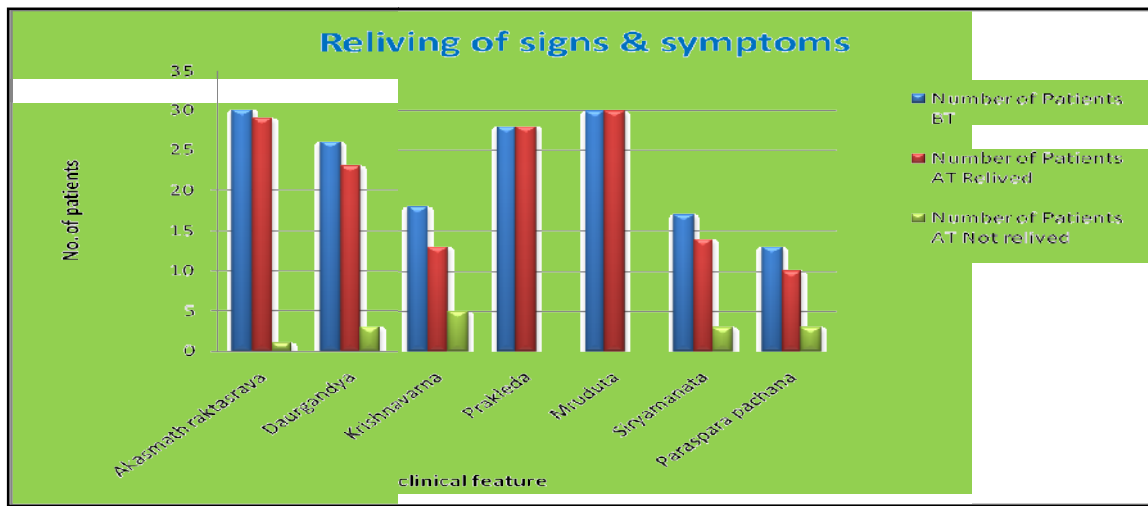
It was found that patients were maximum reported from age group 20 – 30 years i.e. 43 %. At this particular age *pitta* and *kapha* are prominent being the predis-

posing factors. It is evidenced that the youngsters may yield to the society and may habituated to smoking, chewing of tobacco and any other dietary habits. etc. causes *Kapha-Rakta-Dushti*. Sex wise distribution, male incidence rate (73.3%) is much higher than the females (26.6%). Irregular diet, irregular sleep, stress and Habituation of smoking, tobacco, pan are the main causes to predominance in males. All patients had *Dvandvaja Pakriti*. Mixed diet (70%) also plays a major role in causes of the disease because of the food particles are retaining in the mouth. If the teeth are not cleaned properly, putrefaction of the food particles take place which leads to the infections. This leads to the causation of the gingivitis. It can be inferred from this study that the *Kaphakaraka Ahara* and sedentary life style were the most common *Nidana* behind the manifestation of this disease.

Table 1 showing effect of therapy on cardinal features

S.No	Clinical features	Number of Patients			Percentage of relief
		BT	AT		
			Relived	Not relived	
1	<i>Akasmath raktasrava</i>	30	29	1	96.6%
2	<i>Daurgandya</i>	26	23	3	88.46 %
3	<i>Krishnavarna</i>	18	13	5	72.2 %
4	<i>Prakleda</i>	28	28	-	100 %
5	<i>Mruduta</i>	30	30	-	100 %
6	<i>Siryamanata</i>	17	14	3	82.35%
7	<i>Paraspara pachana</i>	13	10	3	76.92%

Chart 1 showing effect of therapy on cardinal features

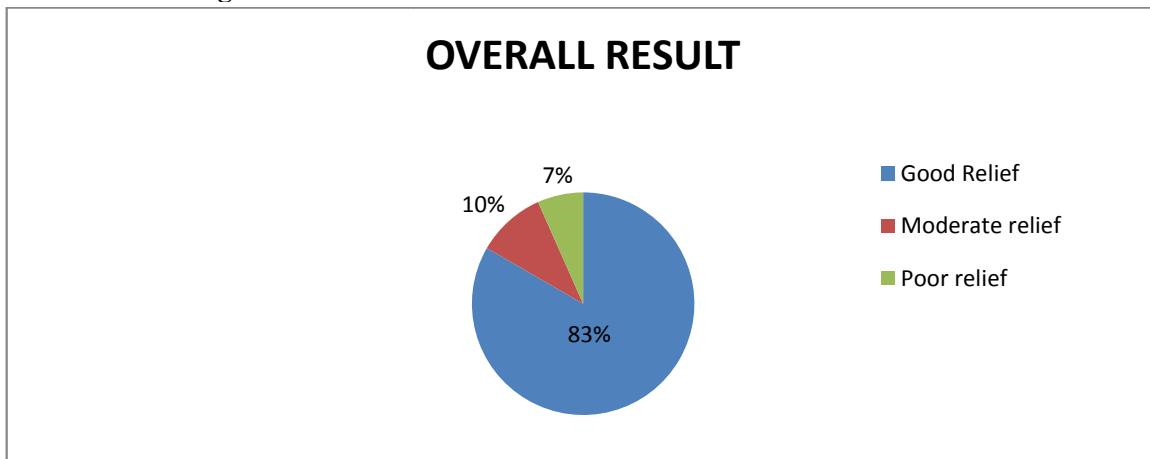


After the application of drug maximum 82.35% of *Siryamanata*, 76.92% of *Paraspara pachana*, 100% of *Prakleda* & *Mrudutva*, 96.6% of *Akasmath rakta srava*, 88.4% of *Daurgandya*, 72.2% of *Krishnavarna* were relieved.

Table 2 showing Overall results

S.No	Result	No. Patients	Percentage
1	Good Relief	25	83.3 %
2	Moderate relief	3	10 %
3	Poor relief	2	6.67 %

Chart 2 showing Overall results



Statistical Results

Table 3 showing Statistical results

S.No	Subjective parameters	W	n _{s/r}	Z	p value	Remark
1	<i>Akasmath raktha srava</i>	435	29	4.7	<.0001	H.S
2	<i>Daurganda</i>	276	23	4.1	<.0001	H.S
3	<i>Krishna varna</i>	91	13	3.16	.0008	V.S
4	<i>Prakleda</i>	406	28	4.62	<.0001	H.S
5	<i>Mrudutva</i>	465	30	4.75	<.0001	H.S
6	<i>Dantamamsa seeryata</i>	105	14	3.28	.0005	H.S
7	<i>Paraspara pachana</i>	55	10	2.75	.0027	V.S

W – Wilcoxon's W $n_{s/r}$ - No. of signed rank Z – Z value p – Probability

H.S – High Significant V.S – Very Significant

DISCUSSION

Discussion on drug:

In classical texts of *Ayurveda Aapta purushas* (ancient Scientists) have described several safe & effective remedies, which having curative, promotive and preventive measures for the clinical management of *Sitada*.

I have selected the drug *Suntyadi Gandusha* for this study. *Suntyadi yavakuta churna* contains *Sunti, Sarsapa, Amalaki, Hareetaki and Vibeethaki*.

- *Hareetaki* having the properties of *Raktastambhaka, Srotosodhana, Vranaropana, Shothahara, Vatanulomana, Tridosahara, Antimicrobial, Anti fungal, Anti bacterial*.
- *Vibheetaki* having the properties of *Raktastambhaka, Sothahara, Krimighna, Vedanastapana, Dhatuwardhaka, Tridosahara - especially Kapha shamaka, Astringent, Thermogenic, Anti-inflammatory, Anti fungal, Anti bacterial and Anti stress*.
- *Amalaki* having the properties of *Rasayana, Raktastambhaka, Rakta pittahara, Tridosahara, Astringent, Anti-inflammatory, Antimicrobial, Anti bacterial, Anti fungal, Antioxidant, Immunomodulatory, Anti ulcer*.

Amalaki is a good source of Vitamin C. A repeated laboratory test showed that every 100g of fresh fruit provides 470 - 680mg and the dehydrated berry provided 2428 - 3470mg of vitamin C. Vitamin C is responsible for helping to build and maintain our tissues. It works by stimulating the immune system and protecting against damage by the free radicals released by the body in its fight against the infection. It stops the destruction of the supporting structures derived from the collagen.

Tannins in *triphala* could affect the inflammatory response via radical scavenging activities. Their antioxidant capacity prevents oxidants from damaging connective tissue and they repair damaged proteins in the blood vessel walls, preventing further damage. Tannins also have shown antiviral, anti bacterial effects. The immunomodulatory capacity of tannins is very useful in preventing the disease.

- *Sunti* having the properties of *Sothahara, Amapachana, Raktasodhaka, Sula-prasamana, Vatakaphahara, Anti-inflammatory, Antimicrobial, Antibacterial, Antifungal, Antioxidant, Anti ulcer*.
- *Sarsapa* having the properties of *Vedanasthapana, Krimighna, Kaphavata shamaka, Anti-inflammatory, Antimicrobial, Antioxidant, Anti fungal, Anti bacterial*.

So *Suntyadi churna* having the properties of anti-inflammatory, antimicrobial, immunomodulatory, antioxidant properties. The predominant *rasas* are *Kasaya, Tiktha, Katu*. All these *dravyas* are *ushna virya* (except *Amalaki - Seeta veerya*) and *madura Vipaka (Saraspa - Katu vipaka)*. It brings the vitiated *doshas* of *Sitada* in to normal state.

By *Rasayana* property *Amalaki* and *Hareetaki* helps in reconstruction of the gingival.

By the *Raktha stambhaka & Raktha pittahara* property these drugs are useful in stoppage of *akasmath raktha srava* (Gingival bleeding).

Due to presence of *Hareetaki, Vibheetaki* this drug might have been helped as a *raktha stambana* and *skandana* and *sunti* helped in *amapachana* one of the 4 *rakta stambaka* procedure. It might be the reason

for stopping of bleeding in the 1st week itself due to this *kashaya* and *tiktha rasas*. The patients who are not responded in the 1st week, some of them got relieved from *rakta srava* in the 2nd week, due to more potency ingredients of the drug.

Probable mode of action of Gandusha:

Gandusha is the process by which any medicated liquid is kept holding in mouth to its full capacity without any movement inside.

1. Stimulation of Salivary glands: Due to stimulation of the salivary glands its secretes more saliva. Saliva contains antibodies that are reactive with indigenous oral bacterial species although IgG and IgM. Saliva also contains coagulation factors (factors VIII, IX and X). That hastens blood coagulation and protects wounds from bacterial invasion. Ptyalin present in saliva acts on medicines, absorption of medicine through mucous membrane of buccal cavity, especially sublingual route by simple diffusion and active transport.

2. Maintenance of oral P^H: The maintenance of P^H at the mucosal epithelial cell surface and the tooth surface is a main function of salivary buffers. The main salivary buffers are the bicarbonate-carbonic acid system. The drug *Suntyadi kashaya* having P^H of 3-4 means acidic. Maximum patients are having oral P^H of 7-8 means alkalic. This acidic nature of *Kasaya* prevents bacterial growth and acts as bacteriostatic. So that this disease *Sitada* completely cured.

3. Stimulation of Taste buds: *Gandusha* stimulate taste buds and promotes gustatory functions. Chemicals stimulate receptors in taste buds. Impulses conveyed from the receptors to the salivary nuclei in brainstem – returning parasympathetic impulses in fibres of facial and glossopharyngeal nerves stimulate secretion of saliva.

4. Nerve stimulation and temperature enhance: Mouth an area of multiple cranial nerves innervations (5th, 7th, 9th, 12th

nerves) gets stimulated by the potency of medicines, movement of medicines, its temperature enhances circulation to the area. Due to 38-40°C temperature of the *Suntyadi kasaya*, temperature of the oral cavity is maintained. Bacteria's are developed in low temperature are subsides with this lukewarm state of the *Gandusha*. This drug stimulates the nerve endings of the oral cavity because of CNS Stimulant property of *Vibheethaki, Amalaki and Sun-ti*.

5. Absorption: Mucous membrane and papillae of the tongue has absorbs more carbohydrates and fats, carried in to the systemic circulation and action is achieved both locally and systemically. The target sites for local drug delivery in the oral cavity include the following: Buccal, Sublingual, Tongue and gum, Periodontal region. *Suntyadi kasaya* having *laghu guna* and *sara*. Due to this properties drug is fastly absorbed from gums and cures the disease.

6. Maintaining intra oral pressure: Maintaining intra oral pressure continuously for 10-15 min, the pressure over the oral mucosa can increase the local blood supply and the enhanced interaction of the *kasaya* with mucous surface can increase the mucosal uptake of the drug in the *kasaya*. This can enhance the healing process of disease. Reflexively increased saliva adds continuously to the retained drug in the mouth, thereby causing increased pressure in the organs related to the oropharynx i.e eyes and nose causing irritation to the mucous membrane of the particular organs. This is seen as watering from eyes and nose.

7. Shodhana: Impacted food particles may get dislodged and get mixed with retained fluid thus it helps in removing the food debris and deposition of gums and regain the oral hygiene. Due to *srotosodana* property

of *kasaya*, *dosas* are mixed with *kasaya* and eliminated through splitting.

Discussion and Conclusion: Statistical significant results were found in all cardinal symptoms. The results are highly satisfactory because after the course of the treatment 83.3% of patients have shown good response, 10% patients have moderate response, 6.67% patients have shown poor response. The availability of raw drug is very easy to get in bulk quantity. The preparation and application of the drug is very simple and easy to adapt. Cost of the drug also very cheap. During and after the period of treatment no complications and side effects were observed. Over viewing the results of the study, *Suntyadi Gandusha* seems to be very effective in the management of *Sitada*.

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CORRESPONDING AUTHOR

Dr. P Pundareekaksha Rao

Asst. Prof., Dept. of Shalakyta Tantra,
Ayurveda College, Coimbatore,
Tamil Nadu, India

Email: dr.pundareeyush@gmail.com

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