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, habitation 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-
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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 Sitada-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 pH, 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, Harreeta, 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 pH 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 – ≥ 75% relief to 99% relief
2. Moderate response – ≥ 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 predisposing 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**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Clinical features</th>
<th>Number of Patients</th>
<th>Percentage of relief</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT Relived</td>
<td>AT Not relived</td>
</tr>
<tr>
<td>1</td>
<td><em>Akasmath raktsrava</em></td>
<td>30</td>
<td>29</td>
</tr>
<tr>
<td>2</td>
<td><em>Daurgandya</em></td>
<td>26</td>
<td>23</td>
</tr>
<tr>
<td>3</td>
<td><em>Krishnavarna</em></td>
<td>18</td>
<td>13</td>
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<tr>
<td>4</td>
<td><em>Prakleda</em></td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td><em>Mruduta</em></td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td><em>Siryamanata</em></td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td><em>Paraspara pachana</em></td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>

**Chart 1 showing effect of therapy on cardinal features**
After the application of drug maximum 100% of Prakleda & Mrudutva, 96.6% of Akasmath raktha srava, 88.4% of Daurga, 82.35% of Siryamanata, 76.92% of Paraspara pachana, 72.2% of Krishnavarna were relieved.

Table 2 showing Overall results

<table>
<thead>
<tr>
<th>S.No</th>
<th>Result</th>
<th>No. Patients</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1</td>
<td>Good Relief</td>
<td>25</td>
<td>83.3 %</td>
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<tr>
<td>2</td>
<td>Moderate Relief</td>
<td>3</td>
<td>10 %</td>
</tr>
<tr>
<td>3</td>
<td>Poor relief</td>
<td>2</td>
<td>6.67 %</td>
</tr>
</tbody>
</table>

Chart 2 showing Overall results

**OVERALL RESULT**

- Good Relief: 83%
- Moderate relief: 7%
- Poor relief: 10%

Statistical Results

Table 3 showing Statistical results

<table>
<thead>
<tr>
<th>S.No</th>
<th>Subjective parameters</th>
<th>W</th>
<th>n_{uv}</th>
<th>Z</th>
<th>p value</th>
<th>Remark</th>
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<td>Akasmath raktha srava</td>
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<tr>
<td>2</td>
<td>Daurga</td>
<td>276</td>
<td>23</td>
<td>4.1</td>
<td>&lt;.0001</td>
<td>H.S</td>
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<td>3</td>
<td>Krishna varna</td>
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<td>13</td>
<td>3.16</td>
<td>.0008</td>
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<td>4.62</td>
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<td>5</td>
<td>Mruduta</td>
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<td>4.75</td>
<td>&lt;.0001</td>
<td>H.S</td>
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<td>Dantamansa seeryata</td>
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<td>Paraspara pachana</td>
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<td>.0027</td>
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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 Vibheetaki.

- **Hareetaki** having the properties of Rakta stambhaka, Srotosodhana, Vrana ropana, Shoonthahara, Vatanulomana, Tridoshahara, Antimicrobial, Anti fungal, Anti bacterial.

- **Vibheetaki** having the properties of Raktastambhaka, Soothahara, Krimighna, Vedanastapana, Dhantuvardhaka, Tridosha hara - especially Kapha shamaka, Astringent, Thermogenic, Anti - inflammatory, Anti fungal, Anti bacterial and Anti stress.

- **Amalaki** having the properties of Rasayana, Rakta stambhaka, Rakta pittahara, Tridosha hara, Astringent, Anti - inflammatory, Antimicrobial, Anti bacterial, Anti fungal, Antioxidant, Immuno-modulatory, 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, Rakta sodhana, Sulaprasama, Vatakaphahara, Anti inflammatory, Antimicrobial, Antibacterial, Antifungal, Antioxidant, Anti ulcer.

- **Sarsapa** having the properties of Vedanastapana, Krimighna, Kaphavata shamaka, Anti inflammatory, Antimicrobial, Antioxidant, Anti fungal, Anti bacterial.

So Suntyadi churna having the properties of anti - inflammatory, anti microbial, 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 stambhana 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 secrets 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. Ptryalin 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 pH:** The maintenance of pH 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 pH of 3-4 means acidic. Maximum patients are having oral pH 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 glassopharyngeal 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 *Sunti*.

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.

**REFERENCES**