A CLINICAL STUDY ON “TRIJATAK CHOORNA WITH MADHU” FOR DANTADHAVAN.

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ABSTRACT

Dinacharya (daily regimen) is the daily lifestyle of a person in order to live healthy, happy and prosperous life. To maintain good and proper health, our great Aacharyas have given guide lines on Dinacharya Upakrama, which firstly tags. Oral dental diseases are emerging as considerable public health problems in India. Besides our personal hygiene, one should follow the dental hygiene as well. Dantadhavan is one of the daily regimen to clean the teeth in order to keep them free from cavities, foul odor, scales and any other oral diseases, proper way to reduce prevalence and risk factors of the diseases of Mukha Rogas, upon which the entire oral as well as general health and hygiene revolves. Here an attempt has been made to study the effects of Trijatak Churna with honey for Dantadhavan, so as to present it systematically, which is the requirement of the present era. Ayurvedic medicine is known to contain antimicrobial agents which are beneficial for prevention and treatment of periodontal disease. Trijatak Churna with Madhu is most suitable and convenient for dental disorders as well as daily use for oral hygiene. In this article the logical interpretation of the result of the therapy obtained in Danta Lakshanas, observation and effects of therapy are explained. Synergistic effect of Vishaghna, Krimighna, Mukhsodhana, Mukhdourgandhyanashana and Lekhaniya of Trijataka and Madhu reduces Dantamala, Dantamalinata and Mukhadourgandhya and increases Mukhaswasthya. Katu, Tikta, Kashaya rasa and Tikshna Ushana guna of Trijatak and Madhu prevents various dental problems. Besides increasing taste reorganization power, Trijatak is highly significant in various oral-dental problem and effective in improving dental and oral health. Probable mode of action of the trial drug is discussed according to observations and results.
KEYWORDS: Dantadhavan, Dinacharya Upakrama, Trijatak Churna, Madhu, Mukhaswasthya, Mukhdourgandhya.

INTRODUCTION

Our ancient Ayurvedic life science gives priority to maintain healthy state of normal human being. So it emphasises on preventive aspects. Ayurveda medical science has its two aims, namely curative and preventive therapy. Swasthavritta includes topics such as Dinacharya (daily regimen) for explaining the daily lifestyle of a person in order to maintain healthy happy and prosperous life.

After getting up in the morning, one should follow dental hygiene parallelly with body or personal hygiene, to maintain good and proper health. Oral/dental diseases are emerging as considerable public health problems in India and our great Aacharyas have given guidance on Dinacharya Upakrama.

In the Modern era, fast moving hectic lifestyle is creating many health problems. Due to improper eating habits like junk food, fast food, ice – creams, sweets, chocolates and addictions like tobacco, gutakha, smoking and alcohol consumption, oral unhygienic problems are arising progressively. So we need to educate people on dental hygiene awareness, to prevent them from acquiring different types of diseases of oral cavity which can occur at various stages of life.

Today, in this competitive era when we see a glorious smile, we definitely forget problems and tensions because smiles are contagious. The importance has been given to Dental hygiene to maintain health and beauty. Ayurveda, the science of healthful living, emphasises equally on preventive and curative aspect of diseases. It also suggests that a wise person who wants to be healthy, should take care of his body.

Healthy teeth are very much necessary for healthy body. If the teeth are not clean, healthy and strong they cannot be capable to mastication and without proper digestion there can’t be proper nutrition. The Mukha i.e. oral cavity, work as reflector of the body health by acting as gateway to the alimentary canal and in that way it is considered to be one of the most important part of the Urdhwa Jatru.

Ancient Ayurveda texts have mentioned usages of chewing sticks in India. Dantadhavan drugs are believed to facilitate salivary secretion that helps in plaque control, while according
to modern researches, all the drugs described in Ayurveda have medicinal, anti-bacterial and anti-caries properties.

SELECTION OF TOPIC
The reference of Trijatak Choorna with Madhu for Dantadhavan Vidhi is given in “Ashtang Sangrah” and “Shushrut Samhita”. This topic is selected to study the properties of Trijatak on Dantaswasthya and verify the given reference. In order to maintain dental Swasthya and oral hygiene, the easily available and convenient materials have been chosen for ‘Dantadhavan vidhi’ of Dinacharya upakrama,

AIMS AND OBJECTIVES

- **Aims**
  1. To assess the efficacy of Trijatak choorna with Madhu for Dantadhavan.
  2. To verify the importance of Dantadhavan vidhi as Upakrama of Dinacharya.

- **Objectives**
  1) To collect all the literatures on Trijatak Choorna and Honey, used for Dantadhavan.
  2) To study and evaluate its effects on Mukhaswasthya by clinical findings.
  3) To identify risk factors and aware people for oral hygiene.

REVIEW OF LITERATURE

**Definition**
Food etc eating material crushed by which instrument those are teeth. Grinding equipment situated inside the mouth which is a type of bone are teeth.

Teeth are one type of bone that is “Ruchakasthi”. The word ‘Ruchaka’ means that which imparts taste and ‘Asthi’ means bone. Thus Ruchaka-asthi means bones associated with the function of imparting taste.$^3$

To maintain strong & healthy teeth & gums, one should clean the teeth twice daily in morning & at night after intake of food, without injuring the gums.$^{4,5,6}$

Advantage Of Dantadhavana$^{7,8}$

- Removes the impurities of tongue, teeth and mouth.
- It brings about freshness, takes away bad odor and coating on teeth.
It keeps the oral cavity healthy by its taste. It produces alleviation of Kapha, clearness in the mouth taste, neutralizes the Kapha and helps to clear the viscid mucous secretions in the mouth.

- It is good exercise for periodontal ligament by masticating the stem.
- It removes food particles. It cleans the oral cavity.
- Perceives the taste better.
- Cleansing agent and gum massage action.
- Prevents pocket formation.
- Leads to anchorage of teeth in bony socket and makes them immobilized.
- Dantadhavan benefits in improving eye sight.
- It purifies the eyes, nose & ears (Nasa, Nayana, Sravana Shuddhi)
- Cheap and readily available.
- Stimulates appetite and desire for food.

**Specific Hetus (causative factors) Of Dantarogas**

- Excessive intake of meat.
- Intake of artificial and spoilt food.
- No proper oral hygiene.
- Absence of cleaning method and techniques.
- Excessive intake of bad habits like Betel nut and Tobacco and Gutakha.
- Uses of bad and useless brush and cleaning material.
- Excessive intake of drinks
- Scraping of the teeth
- Tartar deposition.

**Tvak, Ela and Tamalpatra**, these three dravyas together in same proportion are called as **Trijataka or Trisugandhi**.

**Properties of Trijataka**[^9]

<table>
<thead>
<tr>
<th>Rasa</th>
<th>They have Katu, Tikta and Madhura Rasas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vipaka</td>
<td>Katu</td>
</tr>
<tr>
<td>Virya</td>
<td>Ushna</td>
</tr>
<tr>
<td>Guna</td>
<td>Ruksha, Teeksha and Laghu</td>
</tr>
<tr>
<td>Actions</td>
<td>They are Kapha – Vatahara, Vishaghna, [[[ Deepana, Aampachaka and Varnya.</td>
</tr>
</tbody>
</table>
Uses

They are used as Prakshepa Dravyas (herbs which are added afterwards) in Asavarishtas, Avalehas, etc. to give them good taste, pleasant flavor and to augment appetite. Because of aromatic or sugandhi, they give pleasure to the mind. They act as mouth fresheners.

Trijataka mixed with honey should be rubbed on teeth for dantadhavan purpose twice in a day with the quantity of 2 to 3 gms.\cite{10}

### Tabular presentation of Pharmacodynamic properties of Trijataka and Madhu\cite{11,12,13}

<table>
<thead>
<tr>
<th>Drug</th>
<th>Rasa</th>
<th>Guna</th>
<th>Virya</th>
<th>Vipaka</th>
<th>Dosghnata</th>
<th>Karma</th>
</tr>
</thead>
</table>
| Twak      | Madhura Katu Tikta | Laghu Ruksa   | Ushna | Katu    | Kaphaghna Vaatghna | MukhashodhanaMukhad  
|           |               | Teekshna             |       |         |                   | ourgandhyanashan Datadardhyakarakalekhana  
| Ela       | Katu Madhura  | Laghu Ruksa        | Shita | Madhura | Tridoshaghna      | Stimulant Vedanashapan  
| Patra     | Madhura Katu Tikta | Laghu Teekshna Ushna Picchila | Ushna | Katu | Kaphaghna, Vaatghna | Aruchighna Trishananigrahan  
| Madhu     | Madhura Kashaya | Laghu Ruksa        | Ushna | Katu    | Tridoshaghna      | Lekhaniya Shodhaniya  
|           |               |                    |       |         |                   | Krimighna Balya Vranaropana |

### MATERIALS AND METHODS

- **Materials**

  1. **Trijatak Choorna contains**
     1. Ela - Elettaria Cardamomum Maton.
     2. Twak - Cinnamomum Zeylanicum Blume
     3. Tejapan - Cinnamomum Tamala Nees & Eberm

  2. **Agmark standard Honey**

- **Collection of Material**

  Trijatak choorna was procured from S G Phytopharma, a GMP approved pharmacy, Agmark standard Honey.

- **Preparation of Dantadhavan Material**

  **Mixing Of Trijatak and Madhu**

  The Trijatak choorna and Madhu were taken in same proportion, uniformly mixed and Dantadhavan material was prepared.
METHODOLOGY
Trijatak Choorna was mixed with honey (2.5 gm) so that it can be easily rubbed on teeth by soft toothbrush for 4-5 minutes.

SELECTION OF UPAKRAMA

Upakrama : Dantadhawana
Time : In morning & at night (after meal)
Drugs Name : Trijatak choorna and Madhu
Quantity : 2.5 grams
Duration : 4 to 5 Minutes.
Form : Churna.
Duration of Treatment : 30 days

PROCESS
One should brush teeth properly with help of fingers or tooth brush. Teeth should be brushed in Vertical Horizontal and Circular manner, means lower teeth should be brushed and then upper teeth. Resembling that of Vertical style of brushing teeth. Dantadhavana should be followed by tongue cleaning.¹⁴

PLAN OF WORK
Sampling Method And Research Design Of Clinical Study
Clinical trial was carried out on 60 healthy persons divided into two groups, by random sampling method. The patients were provided the material for clinical study and patients fulfilling the inclusion criteria were selected irrespective of their sex, religion, occupation etc.

Group “A” (Trial Group)
30 patients were treated by Trijataka choorna with Madhu for Dantadhawan for 30 days.

Group “B” (Control Group)
30 patients were treated by Babool toothpaste Dantadhawan for 30 days.

The observations and results obtained from the clinical study were analyzed statistically to evaluate the significance of the curative properties of therapies. The section of discussion
includes the appraisal of the result obtained from the observations of the study. It was lastly concluded.

**Follow up**

Patients were observed before, during and after Dantadhavan upakrama treatment. Follow ups of patients in both groups were taken on 11\(^{th}\), 21\(^{st}\) and 30\(^{th}\) day.

**ASSESSMENT CRITERIA WITH GRADATION**

Symptoms or lakshanas according to grade were the main assessment criteria.\(^{[15,16,17]}\)

<table>
<thead>
<tr>
<th>Symptoms/grade</th>
<th>Grade-0</th>
<th>Grade-1</th>
<th>Grade-2</th>
<th>Grade-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dantamala (Debris index)</td>
<td>No debris, no stain.</td>
<td>1/3 tooth surface/stains without debris.</td>
<td>1/3-2/3 tooth surface.</td>
<td>&gt;2/3 tooth surface.</td>
</tr>
<tr>
<td>Dantamalinata (plaque index)</td>
<td>No plaque.</td>
<td>Thin only on tooth surface</td>
<td>On tooth &amp; in gingival pockets</td>
<td>On tooth &amp; in gingival pockets &amp; margins</td>
</tr>
<tr>
<td>Mukhadourgadhya (Mal Odor)</td>
<td>No mal odor</td>
<td>Barely noticeable odor</td>
<td>Clearly noticeable odor.</td>
<td>Strong offensive odor.</td>
</tr>
<tr>
<td>Mukhaswasthya (Oral Health &amp; Hygiene)</td>
<td>Uttama (perfect)</td>
<td>Madyama (moderate)</td>
<td>Alpa (good)</td>
<td>Hina (poor)</td>
</tr>
</tbody>
</table>

**STATEMENT OF LIMITATION**

**Inclusion Criteria**

a) Age – 18 – 50 years.

b) Sex – both sexes.

c) Individuals having lakshanas of Dantamala, Dantamalinata, Mukhadourgandhya.

Persons who had low awareness on oral hygiene.

**Exclusion Criteria**

a) Individuals suffering from oral diseases like oral thrush and oral cancers.

b) Individuals with any systemic disorder were excluded.

**STATISTICAL METHODS**

Collected data were analyzed by using appropriate statistical students ‘t’ test.

Statistical analysis of the result having ‘P’ value less than < 0.05 was considered as statistically significant in this study.\(^{[18]}\)
OBSERVATIONS

**Improvement Of Mean In Dantamala (Debris Index) Of Both Groups**

<table>
<thead>
<tr>
<th></th>
<th>Day 0</th>
<th>Day 11</th>
<th>Day 21</th>
<th>Day 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.133</td>
<td>2.033</td>
<td>1.833</td>
<td>1.433</td>
</tr>
<tr>
<td>B</td>
<td>2.300</td>
<td>2.300</td>
<td>2.033</td>
<td>1.767</td>
</tr>
</tbody>
</table>

There were significant changes seen in both the groups. Mean B.T in group A was 2.133 that reduced to 1.433 where as in group B mean B.T was 2.300 which was reduced to 1.767.

**Improvement Of Mean In Dantamalinata (Plaque Index) Of Both Groups**

<table>
<thead>
<tr>
<th></th>
<th>Day 0</th>
<th>Day 11</th>
<th>Day 21</th>
<th>Day 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.133</td>
<td>1.967</td>
<td>1.333</td>
<td>0.900</td>
</tr>
<tr>
<td>B</td>
<td>2.400</td>
<td>2.367</td>
<td>1.800</td>
<td>1.433</td>
</tr>
</tbody>
</table>

There was significant change seen in both the groups. Mean B.T in group A was 2.133 which was reduced to 0.900 where as in group B mean B.T was 2.400 which was reduced to 1.433.

**Improvement Of Mean In Mukhadourgandhya (Mal Odor) Of Both Groups**

<table>
<thead>
<tr>
<th></th>
<th>Day 0</th>
<th>Day 11</th>
<th>Day 21</th>
<th>Day 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.500</td>
<td>1.667</td>
<td>1.267</td>
<td>0.633</td>
</tr>
<tr>
<td>B</td>
<td>2.667</td>
<td>2.200</td>
<td>1.700</td>
<td>1.300</td>
</tr>
</tbody>
</table>

There were significant changes seen in both the groups. Mean B.T in group A was 2.500 which was reduced to 0.633 where as in group B mean B.T was 2.667 which was reduced to 1.300.

**Improvement Of Mean In Mukhaswasthya (Oral Health & Hygiene) Of Both Groups**

<table>
<thead>
<tr>
<th></th>
<th>Day 0</th>
<th>Day 11</th>
<th>Day 21</th>
<th>Day 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.400</td>
<td>2.067</td>
<td>1.467</td>
<td>0.967</td>
</tr>
<tr>
<td>B</td>
<td>2.633</td>
<td>2.133</td>
<td>1.867</td>
<td>1.567</td>
</tr>
</tbody>
</table>

There were significant changes seen in both the groups. Mean B.T in group “A” was 2.400 which was reduced to 0.967 where as in group “B” mean B.T was 2.633 which was reduced to 1.567.

**Statistical Analysis Of Reduction In Dantamala (Debris Index)**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean B.T</th>
<th>Mean A.T</th>
<th>Relief %</th>
<th>S.D</th>
<th>&quot;t&quot; Value</th>
<th>&quot;P&quot;</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.133</td>
<td>1.433</td>
<td>32.8</td>
<td>0.535</td>
<td>7.167</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
<tr>
<td>B</td>
<td>2.300</td>
<td>1.767</td>
<td>23.2</td>
<td>0.507</td>
<td>5.757</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
</tbody>
</table>
Here S.D of group A is 0.535 and of group B is 0.507, also calculated “t” value is greater than table t value in both groups. So both groups have Significant effect at 5% level.

**Statistical Analysis Of Reduction In Dantamalinata (Plaque Index)**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean B.T</th>
<th>Mean A.T</th>
<th>Relief %</th>
<th>S.D</th>
<th>&quot;t&quot; Value</th>
<th>&quot;P&quot;</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.133</td>
<td>0.900</td>
<td>57.81</td>
<td>0.679</td>
<td>9.950</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
<tr>
<td>B</td>
<td>2.400</td>
<td>1.433</td>
<td>40.28</td>
<td>0.718</td>
<td>7.370</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Here S.D of group A is 0.679 and of group B is 0.718. Also calculated “t” value is greater than table t value in both groups. So both groups have Significant effect at 5% level.

**Statistical Analysis Of Reduction In Mukhadourgandhya (Mal Odor)**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean B.T</th>
<th>Mean A.T</th>
<th>Relief %</th>
<th>S.D</th>
<th>&quot;t&quot; Value</th>
<th>&quot;P&quot;</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.500</td>
<td>0.633</td>
<td>74.67</td>
<td>0.681</td>
<td>15.004</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
<tr>
<td>B</td>
<td>2.667</td>
<td>1.300</td>
<td>51.25</td>
<td>0.718</td>
<td>10.420</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Here S.D of group A is 0.681 and of group B is 0.718. Also calculated “t” value is greater than table t value in both groups. So both groups have significant effect at 5% level.

**Statistical Analysis Of Improvement In Mukhaswasthya (Oral Health)**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean B.T</th>
<th>Mean A.T</th>
<th>Relief %</th>
<th>S.D</th>
<th>&quot;t&quot; Value</th>
<th>&quot;P&quot;</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.400</td>
<td>0.967</td>
<td>59.72</td>
<td>0.679</td>
<td>11.564</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
<tr>
<td>B</td>
<td>2.633</td>
<td>1.567</td>
<td>40.51</td>
<td>0.583</td>
<td>10.016</td>
<td>&lt; 0.05</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Here S.D of group “A” is 0.679 and of group “B” is 0.583. Also calculated ‘t’ value is greater than table t value in both groups. So both groups have significant effect at 5% level.

**COMPARISON OF EFFECTS IN BOTH THE GROUPS**

**Statistically Analysed Comparison in Reduction Of Dantamala (Debris Index)**

<table>
<thead>
<tr>
<th>Mean diff. A</th>
<th>Mean diff. B</th>
<th>Combined S.E</th>
<th>Combined S.D</th>
<th>Unpaired &quot;t' Value</th>
<th>P</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.700</td>
<td>0.533</td>
<td>0.1346</td>
<td>0.5214</td>
<td>1.239</td>
<td>&gt;0.05</td>
<td>Both groups are Equally Significant</td>
</tr>
</tbody>
</table>

Since Calculated ‘t’ value is less than table value at 5% level, both groups are equally significant effect in Dantamala (Debris Index).
Statistically Analysed Comparison in Reduction Of Dantamalinata (Plaque Index)

<table>
<thead>
<tr>
<th>Mean diff. A</th>
<th>Mean diff. B</th>
<th>Combined S.E</th>
<th>Combined S.D.</th>
<th>Unpaired &quot;t&quot; Value</th>
<th>P</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.233</td>
<td>0.967</td>
<td>0.1804</td>
<td>0.6989</td>
<td>1.478</td>
<td>&gt; 0.05</td>
<td>Both Groups are Equally Significant</td>
</tr>
</tbody>
</table>

Since Calculated ‘t’ value is less than table value at 5% level, both groups are equally significant effect in Dantamalinata (Plaque Index).

Statistically Analysed Comparison in Reduction Of Mukhadourgandhya (Mal Odor)

<table>
<thead>
<tr>
<th>Mean diff. A</th>
<th>Mean diff. B</th>
<th>Combined S.E</th>
<th>Combined S.D.</th>
<th>Unpaired &quot;t&quot; Value</th>
<th>P</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.866</td>
<td>1.367</td>
<td>0.1807</td>
<td>0.700</td>
<td>2.767</td>
<td>&lt; 0.05</td>
<td>Group A is Highly Significant than B</td>
</tr>
</tbody>
</table>

Since Calculated ‘t’ value is greater than table value at 5% level, Trial group is highly significant effect in Mukhadourgandhya(Mal Odor).

Statistically Analysed Comparison in Reduction Of Mukhaswasthya (Oral Health & Hygiene) in Both Groups

<table>
<thead>
<tr>
<th>Mean diff. A</th>
<th>Mean diff. B</th>
<th>Combined S.E</th>
<th>Combined S.D.</th>
<th>Unpaired &quot;t&quot; Value</th>
<th>P</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.433</td>
<td>1.067</td>
<td>0.1634</td>
<td>0.6330</td>
<td>2.245</td>
<td>&lt; 0.05</td>
<td>Group A is More Significant than B</td>
</tr>
</tbody>
</table>

Since calculated ‘t’ value is greater than table value at 5% level, Trial group is more significant effect in Mukhaswasthya (Oral Health and Hygiene).

On the basis of the above mentioned comparison of the effects of both the Groups on each symptom showed that, Group ‘A’ (Trijataka with Madhu) provided better effect in Mukhadourgandhya and Mukhaswasthya. But in Dantamala and Dantamalinata both groups are equally effective.

In trial group ‘A’ 32.8% relief was observed in Debris, 37.5% in Plaque while 46.7% relief is shown in mal odor hence Mukhsawasthya is improved by 72%.

In control group “B”, 19.7% relief is observed in Debris, 23.6% in Plaque while 33.8% relief is shown in mal odor hence Mukhsawasthya is improved by 30.4%.
In this study, in Group “A”, 13.3% patients showed complete relief, marked relief is observed in 33.3%, moderate is seen in 16.7% while mild relief is found in 26.7% and 10% patients are unchanged.

On the other hand in Group “B”, 13.3% patients showed complete relief, marked relief is observed in also 13.3%, moderate is seen in 10% while mild relief is found in 40% and 23.3% patients are unchanged.

DISCUSSION
The effect of Trijataka churana with Madhu as Dantadhavana in dental problem was observed symptom wise and comparative analysis of trial and control group in each symptom is as follows.

As the scope of this clinical trial, on Debris Plaque, Mal odor and poor hygiene, the patient having either of the above symptom or all of the symptom were selected.

Causative Factor
- Dental disorders are continues dynamic process involving repeating periods of demineralization by weak organic acid such as lactic acid, acetic acid, pyruvic acid of microbial origin and subsequent re-mineralization of saliva.
- In Ayurvedic test it is elaborated as all the dental problems are result of vitiated Bodhak kapaha (saliva).
- Accumulation of bacterial plaque around tooth spreads infection and inflammation of deeper tissues together with increasing damage to the periodontium.
Mode of Action of Drug
The drug Trijataka contains Tvak, Ela, Tejaptra. Trijataka and Madhu collectively acts as tridoshahara, specially kaphahara. It is a potent astringent which has anti inflammatory and anti bacterial action. It also has aromatic property so Nirmalta of Mukha is occurred.

According to Rasas’ Properties, We Can Consider the Action as Follows
- The drug Trijataka contains Katu, Tikta, Madhura rasa and Madhu contains Kashaya and Madhura rasa.
- Katu rasa cleanses mouth, stimulates digestion and improve taste of mouth.
- Tikata rasa on contact with tongue destroys all the other gustatory perception so that no other taste is preserved and also dryness the salivation. Due to which, by using Trijataka as Dantadhavana, one can feel the taste of mouth normal and taste of food better.
- Trijataka acts as kapha-vaatahara and also Madhu acts as Tridoshahara. Due to Kashaya rasa of Madhu, it acts as astringents and absorbing property. The vitiated Bodhak kapha in mouth is absorbed that is salivation is reduced and mouth and tongue becomes clean. One feels clean and fresh mouth.
- According to all the above properties of Rasas, we consider that due to the combine effect of Katu, Tikta and Kashaya rasas, the vitiated Bodhak kapha in mouth is absorbed.

The diseases of teeth, gums etc are resulted because of abnormality of saliva that is Bodhak kapaha. In treatment of Kapha disorders we use Katu, Tikta and Kashaya rasa. Dryness of bitter taste reduces stickiness and heaviness of Kapha. Halitosis also reduces when extra saliva is absorbed by Kashaya rasa, then vitiated Kapha is dried and moisture is decreased.

Considering this discussion we confirm that Katu, Tikta, Kashaya rasatmak, Trijataka and Madhu prevent and cure the dental and oral disorders. A bacterial study with department of micro biology reveals that 22 bacteria are found in oral cavity. Out of them 16 are inhibited by decoction while 6 are not inhibited.

Comparison of Effects of Both the Groups
On the basis of the above mentioned comparison of the effects of both the Groups on each symptom showed that, Group “A” (Trijataka with Madhu) provided significant effect in Mukhadourgandhya and Mukhaswasthya than Group “B” (Babool toothpaste). But in Dantamala and Dantamalinata both groups are equally effective.
RESULTS

- In this study in Group “A”, 13.3% patients showed complete relief, marked relief was observed in 33.3%, moderate was seen in 16.7% while mild relief was found in 26.7% and 10% patients were unchanged. (Table No. 43)

- On the other hand in Group “B”, 13.3% patients showed complete relief, marked relief was observed in 13.3%, moderate was seen in 10%, while mild relief was found in 40% and 23.3% patients were unchanged. (Table No. 43)

- Overall (totally) 13.3% patients showed complete relief, marked relief was observed in 23.3%, moderate in 13.3%, while mild relief was found in 33.3% and 16.7% patients were unchanged.

- Thus Dantadhavan upakrama was equally effective in both Group “A” and Group “B”. On the basis of the foregoing discussions it can be concluded that, though both the therapies provided significant relief in the Dental signs and symptoms of the patients, the effect of Trijatak with Madhu was comparatively better than Babool toothpaste.

CONCLUSION

On the basis of the present study, dantdhavana upakrama has significant effect in maintenance of oral health and hygiene, following conclusions can be drawn.

- Trijataka and madhu has Vishaghna, Krimighna, mukhshodhana, mukhdourgandhyanashana and Lekhaniya action. Hence synergistic effect of it reduces dantamala, dantamalindana and mukhadourgandhya and increases Mukhaswasathy.

- Trijataka and Madhu has Katu, Tikta, Kashaya rasa and Tikshna Ushana guna. Thus it prevents various dental problems. Trijataka is highly significant in various oro-dental problem and it increases taste reorganization power It is effective in improving dental and oral health.

Scope and Limitation

This limited study has not covered all the aspects of the problem, but clinical trials shows very encouraging results. More study is necessary on larger group of people to draw the final inferences. Modern public is habitual of Dantdhavan (cleaning) material in the form of paste, so future study can be carried out on the prepared paste. Various drug combinations which are useful for dental health can be studied in various Dantarogas.
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