

## Sphatikadi Yoga in Dantasharkara: A Clinical Study

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### Abstract

*Danta* is the one of the part of Face which mainly helps in *charvanakriya* (chewing). So, it is necessary to keep them clean and healthy. For maintains of hygienic condition of teeth, *Danta Dhavana karma* (Brushing) is elaborately explained in Ayurvedic texts. Because of busy life style, improper brushing resulted in formation of *Dantasharkara* (Tartar). This *Dantasharkara* further becomes root cause of all periodontal diseases. Statistical data reveals that, Periodontal diseases affect million of people in the world.

The symptoms of Periodontal disease start early age of life and cause the loss of teeth. The percentage of teeth loss was high in this compared to other dental diseases[3] hence, dantasharkara should be treated effectively. Different herbomineral *Dantayoga* preparations are available Rasa Shastra classics. The reference of *Sphatika* (Potash alum) is seen in various *Dantayoga* preparations. These evidences provide a clue to take up an observational study to analyze efficacy of *Spatikadi Yoga*. The ingredients of *Spatikadi Yoga* are *Spatika*, *Lavanga*, *Ela*, *Kandasharkara* in equal quantity.

The present paper focuses on the simpler, effective and economic management of *Dantasharkara* by *Spatikadi Yoga* an Ayurvedic classical preparation.

**Keywords:** Ayurveda; *Spatikadi Yoga*; Tartar; Potash Alum Preparations.

### Introduction

*Danta* (teeth) is considered as one of the attractive part of face [1]. The one which helps in *charvanakriya* is called as *danta*. In Ayurvedic texts '*Dantasharkara*' has been mentioned under '*mukharoga*'. *Dantasharkara* is the disease which is root cause of all periodontal diseases. Periodontal diseases affect million of people [2]. These diseases start early in life and cause the loss of teeth than all other reasons combined [3]. In various *Dantayoga Sphatika* (Potash alum) has been mentioned. These evidences provide a clue to take up an observational study to analyze efficacy of *Spatikadi Yoga* [4].

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### Methodology

#### Selection of the Subjects

Selection of the subjects was done from KLE'S Institute of Dental Science Belgaum who were suffering with classical features of *Dantasharkara* (1<sup>st</sup> grade supragingival calculus) were selected irrespective of sex, religion, socioeconomic status, occupation, food habits and prakruti.

#### Study Design

Selected subjects were divided into 2 groups

**Group A:** Trial Group: Consisted of 20 patients. - All patients were treated with *Sphatikadi yoga* for 14 days.

**Group B:** Control Group: Consisted of 20 patients. - The patients were treated with placebo (starch) for 14 days.

#### Criteria for the Selection of Patients

- Yellowish, hard deposition on teeth

- Dantamoola shola, raktasrava
- Danta shola
- Mukhadourgandhya

*Above Said Each Criteria Observed as Follows*

- Same
- Reduced

By 0- 25%

25-50%

50-75%

75-100%

#### *Assessment of Results*

Results were graded depending on sign & symptoms in the following way.

- Good response: All signs and symptoms relieved.
- Moderate response: any two symptoms relieved
- Mild response: only one symptom is relieved
- No response: presence of all signs and symptoms

#### *Diagnostic Gradation*

Greene and vermillin- the calculus on the tooth surfaces was examined and recorded using a mouth mirror and explorer no. 17 & no 23. The calculus score per quadrant was obtained by totaling all the scores and dividing by the number of surfaces examined.

**Table 1:** Shows diagnostic gradation

Score	Criteria
0	No calculus present
1	Supragingival calculus covering not more than one third of the exposed to the surface
2	Supragingival calculus covering more than one third but not more than two thirds of tooth exposed tooth surface or the presence of individual flecks of sub gingival calculus around the cervical portion of the tooth or both.
3	Supragingival calculus covering more than two thirds of the exposed tooth surface or a continuous heavy band of sub gingival calculus around the cervical portion of the tooth or both

#### *Gingival Index –Loe and silness*

- The distofacialpupilla and interdental gingival distally
- Mesiofacialpapillar and interdental gingival mesially
- Facial gingival

- Lingual palatal gingival

The total score was obtained by adding the scores for each unit and dividing by the number of units examined.

#### *Pain Index–Edalia and Bayer*

#### *Mukhadourgandya*

**Table 2:** Shows grading of gingival index

Scores	Criteria
0	Normal gingiva
1	Mild inflammation, slight change in colour, slight edema, no bleeding on probing.
2	Moderate inflammation, redness, edema, glazing and bleeding on probing
3	Severe inflammation, marked redness, edema, ulcerations, tendency to spontaneous bleeding.

**Table 3:** Shows grading of pain index

Scores	Criteria
0	Criteria
1	Discomfort but cannot be called as pain
2	Mild pain
3	Moderate pain
4	Severe pain
5	Unbearable pain

**Table 4:** Shows grading of mukhadourgandhya

Scores	Criteria
0	Absence of bad breath
1	Bad breath but bearable
2	Moderate
3	Severe unbearable bad breath

#### **Results and Observations**

During clinical study of Sphatikadi yoga in Dantasharkara

- It is affecting more male compared to female
- Incidence of *Dantasharkara* is more seen in middle age group
- Incidence of *Dantasharkara* seen almost equal in all religion.
- Middle class and lower class people are most affected from *Dantasharkara* compared to upper class.

- Workers category of people are more affected from *Dantasharkara* compared to officers and students.
- Non vegetarian people were more affected from *Dantasharkara* compared to vegetarian.
- Dantasharkara* is more seen in *kaphajaprakruti* compared to *pittaja* and *vataja*.
- The incidence of *Dantasharkara* is more who are not maintaining oral hygiene properly.

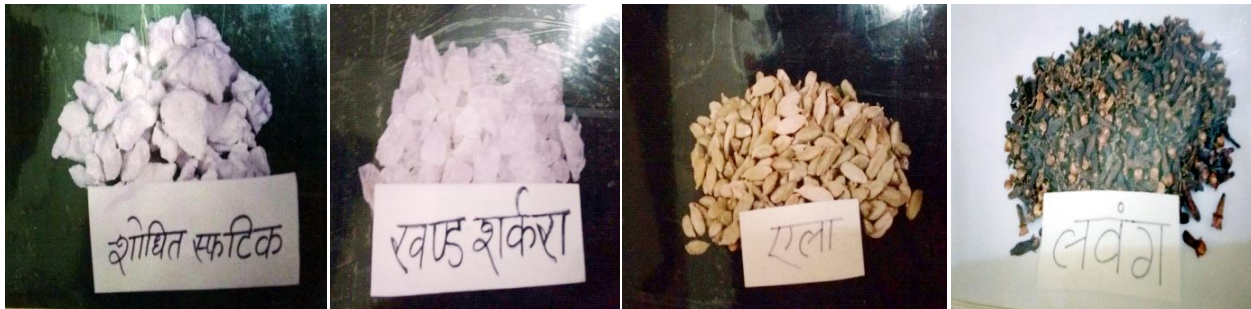


Fig. 1: Images of ingredients of spatikadi yoga



Fig. 2: Image of spatikadi yoga

Lavang: It is one of the Sugandha Triphala. Chemically it contains volatile oil. The oil is pharmacologically proved for its pain reducing action.

Ela: It is included both in Trijat & Sugandha triphala group. It is known for its fragrance & mouth freshening activity.

Sita: Included in shonitastapanaMahakashaya It is dahashamaka.

The *Sphatikadi yoga* is *kaphavatashamaka*, *mukhasravashoshaka*, *lekhaniya*, *mukhadour gandhyanashaka*, *shotahara* and *shoolahara*. So more number of subjects are relieved from *datashrkara* in trial group.

According to *classics*, *Madhurarasa* is *kaphakaraka* which is not advisable for *dantadhavana*. But sita (sugar) is one of the ingredient in this preparation. Sugar may be added to introduce palatability in the final product. *Dantasharkara* and dental calculus can be co-related with each other in symptomatology and in pathophysiology. *Sphatikadi yoga* found to have *lekhaniya* (scaling effect) *shotagna* (anti-inflammatory), *shoolagna* (analgesic) and *sugandhi* qualities (mouth freshening effect). It becomes clear from the observations that the *Sphatikadi yoga* is effective in the management of *Dantasharkara*.

**Trial Group**

Table 5: Shows response of experimental group

Response	Results
Completely cured	60%
Moderately	25%
Mildly cured	10%
Not cured	5%

**Control Group**

Table 6: Shows response of control group

Response	Results
Completely cured	5%
Moderately	5%
Mildly cured	20%
Not cured	70%

Table 5: Shows response of experimental group

Groups	C.C	M.C	MIL.C	N.C
Experimental Group	60%	25%	10%	5%
Control Group	5%	5%	20%	70%

**Discussion and Conclusion**

Spatika is effective in mukhroga It is having property of stergtheningteeth. The most important quality is lekhaneeya & raktastambaka

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