

Effect of *Lakshadi Taila Gandusha* in Periodontitis: A Pilot Study

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ABSTRACT

Periodontitis is the most common chronic disease in the world. In *Ayurveda*, the symptoms of *Dantveshtak* can be correlated to Periodontitis. *Prathisarana* and *Gandusha* are the procedures explained in our classics for oral hygiene. So, the present study was undertaken to study the effect of *Lakshadi Taila Gandusha* in the management of Periodontitis. About 15 patients with Periodontitis as per inclusion criteria were selected from O.P.D of an Ayurved college and a private dental hospital. 15 Patients were treated by *Lakshadi Taila Gandusha* for 15 days. Clinical signs and symptoms were given suitable scores according to the severity and were assessed by pre and post data. The treatment showed significant results after the treatment.

Key Words *Periodontitis, Dantveshtak, Lakshadi oil, Gandusha*

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INTRODUCTION

Ayurveda is the oldest sciences and philosophy in the world with a long record of clinical experience. It involves a holistic view of man, his health and illness. Even though dentistry was not a specialised branch of *Ayurveda*, it is included in *Shalaky Tantra*. Oral diseases continue to be a major health problem worldwide. Oral health also reflects body health.

Shalaky tantra is one of the important branches of *Ashtanga Ayurveda*, which deals with *Urdwajatrugata Rogas*. The *Mukha* i.e. oral cavity works as a reflector of the body health by acting as gateway of the alimentary canal and it is considered to be one of the most important parts

of the *Urdhwa Jatru*. *Dantveshtak* is one among the *Dantamoolagatha Rogas* mentioned under *Mukha rogas*¹. The reference is available in *Sushruta Samhitha* (2350B.C). Clinical features are inflamed gums which Bleed on brushing, burning sensation, Halito-sis and Tooth mobility due to the vitiation of *Pitta* and *Raktha*. Clinically *Dantveshtak* shows similarity with chronic Periodontitis. It is defined as “an inflammatory disease of the supporting tissues of the teeth caused by specific microorganisms, resulting in progressive destruction of periodontal ligament and alveolar bone with increased probing depth formation, recession or both”². The diseases cause mental distress to the person mainly due to Foul smell, Pus discharge,

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Gingival bleeding and Tooth mobility". *Gandusha* and *Lepana* are proved to be effective in *Mukha roga* and its complication. They are cost-effective since no major infrastructure is required, less intervention in manual support, adaptable at home/clinical level. Hence in the present study, an effort is made to observe the effect of *Gandusha* through *Lakshadi Taila* in Periodontitis.

MATERIALS AND METHODS

Taila preparation - The fine powder of the dried Laksha (*Kalka dravya*) was prepared and mixed with water to make *Kalka Tila Taila* was taken in a steel vessel, to it prepared *Laksha rasa*, *ksheera* and *Kalka* were added mixed thoroughly and heated over *Mandagni* till it attained *Madhyama paka*. It was filtered through a clean cloth. After cooling the prepared medicine was kept in a clean vessel.

Drug Analysis: Analysis and safety studies of lakshadi tail was conducted in Qualichem laboratory, Near Chaudhary lifestyle, Ramnagar, Nagpur. The Findings were shown in Table 1 below.

Table 1 lakshadi oil Parameters

Parameters for <i>Lakshadi Taila</i>	Values
Acid Value	0.39
Saponification Test	189.96
Specific Gravity	0.9119
Iodine Value	104.11
Relative density	1.46717
Rancidity	ABSENT
Peroxide Value	1.12
Dynamic Viscosity	15.74

Patient selection- The patient attending the OPD and IPD . P.G. unit of Shalakyta tantra

Department, of ayurved college and a private dental college who were diagnosed with periodontitis were selected

Statistical Analysis

The data was collected & analyzed. The total scores before & after treatment were assessed statistically using **the Wilcoxon Z test**. Analysis was considered by SPSS for Windows (Statistical presentation system software).

Study Design

1. Longitudinal observational study.
2. Total of 15 patients were selected for the study.

Method of collection of data

1. Sampling method: Simple Random Sampling (SRS)
2. Sample size: 15 subjects irrespective of gender, socio-economic status, religion, were selected for the study.
3. Selection criteria: Based on diagnostic criteria and inclusion criteria.

Inclusion Criteria:

1. Subjects with Periodontitis signs and symptoms.
2. Patients willing for study irrespective of gender, socio-economic status, religion

Exclusion Criteria:

1. Patients having neoplasia.
2. Immune deficiency disorders like HIV.
3. Pregnant and lactating women.

Assessment Criteria:

Subjective Parameters – seven subjective parameters as per *Ayurveda* features have been

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evaluated before and after the treatment by using a 0-3 scoring system.

Objective Parameters - Gingival Index, calculus index, mobility index and periodontal index

Instructions to the Patient -All the patients were advised to follow the instructions during therapy and in the follow-up period.

- Oral hygienic practices and their importance in the reversal of the disease were explained.
- Proper brushing by using medium bristle brush 2 times a day morning and evening after meals.
- Instructions regarding *Ahara* (food) and *Vihara* (regimen) were given i.e. fibrous, non-sticky; less sweeten etc. and proper mastication by using both sides of the jaws.
- Proper mouth rinses after each meal/food item

Methods of *Gandusha*

The patient should be made to sit comfortably in a straight position. Then take the medicated liquid in his mouth without doing any movement inside with a concentrated mind and face slightly lifted. Then the patient was advised not to drink the liquid and hold it until the mouth gets filled with oropharyngeal secretions and watery discharge appears from the nose and the eyes (*Netra*). Then it should be spit out and relaxed.

Data Analysis: Data was recorded in pre, post-treatment and follow up periods. Data analysis was carried out by using the SPSS statistics 16 packages. Distribution was generated and data were tabulated.

OBSERVATION AND RESULT

In the present study, 15 patients having Periodontitis fulfilling the inclusion criteria were randomly selected. The maximum number of the patients i.e. 57.5% re-ported in the age group of 50-60 years. The majority of the patients (72.5%) were males. Also, 37.5% of the patients were employees, and the majority of the patients (52.5%) belonged to the middle class. 100% of patients were having complaints of *Shotha*, *dhour-gandhya*, (gingival bleeding, halitosis) . 47.5% of patients were having complaints of *chaladanta*, (tooth mobility) and *Danta Shoola*. *daha* was present in 85% of patients and 52.5% of patients were reported to have *paka*. *Rakthasrava* was reported in 55% of patients and calculus was found in 60.5% of patients...

Effect on Gingival Index: Statistical analysis showed that the mean score which was 1.60 before treatment was reduced to 0.35 after treatment with 78.13% improvement, and there is a statistically significant change. ($P < 0.05$)

Effect on Periodontal Index: Statistical analysis showed that the mean score which was 2.33 before treatment was reduced to 1.00 after treatment with 56.99% improvement, and there is a statistically significant change. ($P < 0.05$)

Effect on *Dourgandhya*: Statistical analysis showed that the mean score which was 2.23 before treatment was reduced to 0.90 after treatment with 75.39% improvement, and there is a statistically significant change. ($P < 0.05$)

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Effect on Shotha: Statistical analysis showed that the mean score which was 1.60 before treatment was reduced to 0.45 after treatment with 78.13% improvement, and there is a statistically significant change. ($P < 0.05$)

Overall effect of treatment in Periodontitis out of 15 patients in this study-1 patient (2%) was getting Mild improvement, 5 patients (38%) were getting Moderate improvement and 9 patients (60%) were getting Marked Improvement.

The overall effect of the treatment is 66.86%.

DISCUSSION

Periodontal disease are highly prevalent in India. This is due to a lack of awareness about dental hygiene among the public. Frequent intake of sweets, improper brushing of teeth, tobacco chewing, taking nonveg and junk food leads to poor dental hygiene. People ignore periodontal diseases as they are never life-threatening. It has been observed that the incidence of Periodontitis is maximum in the age group of 50-60, subsequently in the age group of 40-50. Studies have shown that the prevalence and severity of periodontal disease increase in the middle age group³.

Gandusha helps in the dilation of the blood vessels in the Oral mucosa (Gingival) and thus helps in the absorption of the active ingredients present in medicine, which in turn gives strength to the roots of the teeth. The drugs used in this preparation Possess Antiinflammatory, Antiinfective property and Antioxidant property

helps in faster healing.⁴ Due to the lipophilic action of *Taila* is best for absorption of the drug. *Gandusha* with *Taila* forms a smear layer over the dentin thus helps in curing hypersensitivity. Oil pulling activates salivary enzymes to absorb toxins such as chemical toxins, bacterial toxins and environmental toxins from the blood and removed them from the body through the tongue. It generates Antioxidants that damage the cell wall of microorganisms and kill them. This oil will coat the teeth and gingival and inhibits bacterial co-aggregation and plaque formation. Thus, the plaque building bacteria responsible for dental caries, gingivitis, periodontitis and bad breath from the mouth are removed from the oral cavity. Gums become pink, healthier and the problem of bleeding gums is solved. Oil pulling is observed to bring improvement in oral hygiene when practised properly and regularly.

Lakshadi taila helps to reduce the inflammation of gum, bleeding, pain and discolouration of gums. *Kashaya* and *thiktha rasa* of *lakshadi taila* help to pacify *Pittha* and *Kapha Dosha*. It is anti-inflammatory, Antibacterial and Haemostatic. Also have *Vrana Shodhaka*, *Vrana Ropaka* and *Krimighna* properties. *Laksha* is one of *AsthiSandaneeyadravya*, so it is helpful in *Sandana* of Periodontal bone and ligaments. Hence help in reducing the inflammation of the Gingival, prevent the growth of microorganisms, helps in faster healing and restore the integrity of the Periodontal tissues⁵.

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CONCLUSION

The main cause of the disease *Periodontitis* is poor oral hygiene. *lakshadi taila* has significant Anti-microbial activity, Anti-inflammatory, Antioxidant, *Sandaneeya*, *Rak-thasthambhaka*, *Vrana Shodhaka* and *Vrana-ropaka* action. *Gandusha* has a remarkable effect on the management of *Dantveshtak*. To conclude the study *Gandusha with Lakshadi oil* has shown significant result in *Periodontitis*. Observation of *Pathya* and *Apathya* during and after treatment is very important in preventing the recurrence of the disease.

LIMITATION: As this is a pilot study studies with higher sample need to carry about effectiveness of *lakshadi oil* in *periodontitis*.

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