




Darvyadi Pratisaran against Shitada (Gingivitis) – Case Report.

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ABSTRACT

Shitada (Gingivitis) is widely detailed in the western Dentistry, as well as in *Shalaky Tantra* from Ayurveda. It can progress to periodontitis, eventually risking tooth and alveolar bone loss. The prevalence of *Shitada* (Gingivitis) is significantly high, however underreported. Chronicity warrants long term and repetitive medication with anti-inflammatory, and antibiotic agents, paving risks for adverse drug reactions. *Pratisarana*, the Ayurvedic local management as observed in this single case study offers safe, effective, and economical alternative. This can be extended to the high-risk groups for prevention, and to the patients for management / cure.

Keywords: Ayurveda, *Shalaky Tantra*, *Shitada* (Gingivitis), *Pratisarana*, *Berberis aristata*

INTRODUCTION

Ayurveda is arguably the oldest healthcare system in the world, and advocates excellent prevention, and treatments against almost every health condition¹. It ab-initio believed in specialization and suggested eight clinical specialties; *Shalaky Tantra* is one among these eight². *Sushruta*, the father of Indian Surgery, mentioned in depth about *Shitada* as in important gum disease³. There are more than chance descriptions in Ayurveda when symptomatically compared to Gingivitis. *Vagbhat* described *Shitada* in *Dantmoogata Roga* (Gingival diseases) due to vitiation of *Kapha* and *Rakta Dosh*⁴. *Shitada* features *Akasmata Raktasrava* (spontaneous bleeding), *Durgandhata* (halitosis), *Krishnata* (blackish discoloration) of gums, *Prakledata* (moistness) *mriduta* (softness), *Vedana* (pain), *Paka* (suppuration), *Shotha* (inflammation), *Dantamamsani shiryante* (gingival recession) and *Pachanti parasparam*

(gingival ripening) due to vitiated *Kapha* and *Rakta Dosh*⁵. Various treatment modalities have been prescribed in Ayurveda like *Pratisarana*, *Gandush*, *Raktamokshana* and *Nasya*, along with systemic balancing of *Tridosha*. As per the Western medicine, Gingivitis is the inflammation of gingiva characterized by inflammation adjoining the cervical portion of teeth and the alveolar processes⁶. Among all periodontal diseases, Gingivitis, due to deposition of plaque, is noticed in more than 50 % of children; featuring redness, inflammation, halitosis, and a tendency to bleed. Modern treatments include proper oral hygiene, antibiotics, and scaling⁷. The epidemiological studies conducted by American Academy of Periodontology shows that gingivitis of varying severities is universal and affects nearly 80% of the world population⁸.



Etiology - Continuous stimulation & irritations can trigger developmental, reactive, inflammatory and neoplastic conditions at the Oral mucosa⁹. These factors for gingivitis can be categorized into two groups -

- The local factors - Infections, calculus, mouth breathing, food impaction, and faulty restorations
- The systemic factors - Nutritional deficiencies, allergy, heredity, endocrinal changes and drugs like phenol, aspirin¹⁰

An early feature of gingivitis is bleeding from gingival sulcus upon as mild irritation as tooth brushing.

CASE REPORT

A 42-year-old female with OPD No. 3320220503xxxx came to the National Institute of Ayurveda Jaipur *Shalakya* OPD with chief complaints of swelling in gums, bleeding from gums and constant halitosis. Plaque was present. No history of hypertension and Diabetes Mellitus was present. Patient was vegetarian with normal appetite and bowel habits. No history of any addiction such as smoking and tobacco. Morning brushing was practiced. A provisional diagnosis of *Shitad* (Gingivitis) was made.

The following Symptoms Severity Scales were as applied- Table 1

Gingival Index (Gingival Index) by Loes and Silness (1963)¹¹

The severity of Gingivitis is done on the gingival index based on color, consistency, bleeding on probing with the help of mouth mirror, probe. On selected tooth, scoring is done which are known as Index Teeth (16, 12, 24, 36, 32, and 44). Distofacial, facial, mediofacial, lingual are the four gingival surfaces examined for each tooth.

GI score of tooth: Total score around each tooth divided by four -Table 2

GI score of individual-Total score per tooth/No. of Tooth examined -Table 3

Examination before treatment Table 4

GI score of an individual: $7.25/6 = 1.20$ (Moderate)

Treatment Prescribed

Drug - *Darvi Raskriya Pratisarana*¹²

Usage - Local application on gums

Procedure - Five grams of *Darvi Raskriya* to be mixed in 3 ml of honey, and to be rubbed (*Pratisarana*) gently over the gums.

Frequency - Twice a day

Duration - four months

Preparation of *Darvi Raskriya*

Daruharidra / *Berberis aristata* was procured from an established supplier and prepared at the Teaching Pharmacy of the National Institute of Ayurveda Jaipur as per *Bhavaprakasha* Vol 1. Coarsely ground *Darvi* was boiled in 16x water, reduced to a quarter, further boiled on low flame with equal volume of cow's milk till the attainment of thick consistency. It was cooled down, and stored¹². Picture 1- *Darvi Raskriya Prepared*.

RESULTS -Table 5

Gingival Index score of the subject after treatment: $2.25/6 = 0.375$ (Mild)

Based upon the Symptoms Severity Scales, the clinical outcomes were as follows- Table 6

DISCUSSION

Darvi (*Berberis aristata*) is the best drug for *Mukhgata Roga* (diseases of oral cavity) as mentioned by various *Acharyas*. *Darvi* is *Tikta* (bitter) in *Rasa* / Taste and *Ushna* (Heating) in *Veerya* (Potency) hence was against pain and inflammation in gingivitis. *Berberis aristata* is an established anti-inflammatory herb as proven through various studies by R kumar, S K Gupta and DAR Namisha. *Pratisarana* is an ideal approach as the local application in *Mukhgata Roga* (diseases of oral cavity). *Pratisarana* increases the blood supply, improves the mucosal environment and can ensure partial direct absorption¹³. *Rasanjana* has *Laghu* / Light and *Ruksha* (Dry attribute) hence reduces *Kapha* from body. *Madhu* (Honey) has *Kashaya-Madhura Rasa* (Astringent - Sweet Tastes), *Rooksha guna* (Dry attribute) and *Ushna veerya* (Heating potency)¹⁴. Honey is an effective antibiotic, anti-inflammatory, antioxidant, analgesic, immunomodulatory and wound healing¹⁵. Due to viscosity, and higher colloidal pressure, honey acted in reducing inflammation of gums. *Shitada* is due to vitiation of *Kapha Rakta* and *Darvi Raskriya* is effective in controlling the vitiations of *Kapha Rakta*¹³. The Modern management of gingivitis is sometimes not foolproof as scaling, anti-inflammatory agents, mouthwash etc. are maculated with the frequent medication, high costs and time consuming. Moreover, these pose threat of several adverse effects including staining, loss of taste sensation, oral mucosal erosions, gastritis etc. upon prolonged use. Another treatment is

surgery which is invasive, has high chances of recurrence and is expensive.

CONCLUSION

Keeping in mind the significant results obtained, and scientifically established safety, *Darvi Rasakriya Pratisaran* offers a great scope as a safe, potent and cost effective line of treatment through Ayurveda in the management of *Shitada* (Gingivitis). This can be advised to the public in general & to the high-risk groups in particular against Gingivitis / *Shitada*.

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Table 1 The following Symptoms Severity Scales were as applied-

● Akasmata Rakta Srava (Bleeding)	Score
Absence of bleeding	0
Slight bleeding on brushing or occasional bleeding	1
Moderate bleeding on brushing or eating hard articles	2
Severe bleeding on brushing or even on chewing food	3
Spontaneous bleeding	4
● Vedana (Pain)	Score
Absence of pain	0
Occasional pain with low intensity-dull ache	1
Frequent pain with moderate intensity-continuous dull ache	2
Continuous pain with severe intensity which increases during mastication-lancinating pain-radiating type of pain	3
● Mukha Daurgandhya (Halitosis)	Score
Absence of bad odour	0
Slight bad odour which decreases after mouth wash	1
Moderate bad odour rarely decreases after mouth wash	2
Persistent bad odour even after repeated mouth wash	3
● Shotha (Inflammation)	Score
Absence of inflammation	0
Mild inflammation, slight change in colour and in texture of the marginal or papillary gingival unit	1
Moderate inflammation, glazing redness, oedema of the marginal or papillary gingival unit	2
Severe inflammation, marked redness, oedema of the marginal or papillary gingival unit	3
● Krishnata (Discoloration of gums)	Score
Normal (pinkish red)	0
Slight discoloration of gums, reddish	1
Moderate discoloration of gums, reddish blue	2
Severe discoloration of gums, bluish red, or blue	3

● <i>Dantamamsa Prakledata (Moistness)</i>	Score
Absence of moistness	0
Slight moistness is visible	1
Moderate moistness is visible	2
Severe moistness is visible	3

● <i>Dantamamsa Mriduta (Sponginess)</i>	Score
Absence of spongy gums	0
Slight spongy gums	1
Moderate spongy gums	2
Severe spongy gums	3

Table 2 GI score of tooth: Total score around each tooth divided by four

SCORE	APPEARANCE	INFLAMMATION	BLEEDING ON PROBING
0	Normal	None	No bleeding
1	Slight change in color, texture and edema	Mild	No bleeding
2	Redness, hypertrophy, edema and glazing	Moderate	Bleeding on probing
3	Marked redness, hypertrophy, edema, ulceration	Severe	Spontaneous bleeding

Table 3 GI score of individual-Total score per tooth/No. of Tooth examined.

Score	Inflammation
0.1-1	Mild
1.1-2	Moderate
2.1-3	Severe

Table 4 Examination before treatment

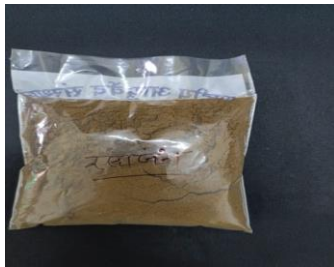
Faces of Tooth	16	12	24	36	42	44
Distofacial	1	1	2	1	1	2
Facial	2	1	1	1	0	0
Mediofacial	1	1	1	1	2	1
Lingual	1	1	1	2	2	2
Total	5	4	5	5	5	5
Total score around each tooth/4	1.25	1	1.25	1.25	1.25	1.25

Table 5 Results

Faces of Teeth	16	12	24	36	42	44
Distofacial	1	0	0	1	1	1
Facial	0	0	0	1	0	0
Mediofacial	0	0	1	0	0	1
Lingual	0	1	1	0	0	0
Total	1	1	2	2	1	2
Total score around each tooth/4	0.25	0.25	0.5	0.5	0.25	0.5

Table 6 Based upon the Symptoms Severity Scales, the clinical outcomes were as follows-

Symptoms	Before Treatment	After treatment
Spontaneous bleeding	3	0
Inflammation	2	0
Redness	1	0
Halitosis	1	0
Contour	1	0
Pain	2	0
Discoloration	2	0
Sponginess	1	0



Picture 1- *Darvi Rasakriya Prepared.*

Before Treatment



Picture 2- Swollen Gums before treatment

After Treatment



Picture 3- Healthy Gums after treatment