

Efficacy of Panchashireesh Agad Choorna Pratisaran In Tobacco Chewing Induced Gingivitis - A case study

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ABSTRACT

This case study presents the clinical outcome of Ayurvedic classical formulations - Panchashireesh Agad Choorna in a 25-year-old male patient diagnosed with tobacco-induced gingivitis. The Vishaghna as well as Panchashirish Agad Choorna Pratisaran known for its anti-inflammatory and wound-healing properties. The intervention by smoothly applying on gums showed significant improvement in gingival health over a 21-day period.

Keywords: Panchashireesh Agad Choorna, Tobacco-induced gingivitis, Vishaghna, Pratisaran, Ayurveda.

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Introduction

Gingivitis is a most common periodontal disease, and it usually manifests as chronic gingivitis, during which the gums become swollen, red, and bleeding through gums. (1) However, it is usually painless, so many people do not seek treatment (2). Most common treatment modalities include nonsurgical periodontic therapy such as scaling and polishing, and topical antibacterial agents like chlorhexidine mouthwash are often used as well (3). However, current research has shown that herbal alternatives from Ayurveda, an ancient Indian health system that focuses on overall health maintenance may be beneficial (14). Ayurveda proposes multiple methods to keep the oral cavity healthy, including *Pratisaran Chikitsa*, which used to local application inside the mouth (4). According to Ayurvedic texts like *Charaka Samhita*, talks in detail about this method, which is thought to be able to heal systemic diseases due to properties of *vrana ropaka*, *shothahara*, and *vishahara* (5). Ayurvedic remedies are effective for gum inflammation and general health improvement and do not have known adverse effects (6).

Tobacco-induced gingivitis is a common oral health issue resulting from chronic tobacco use (6). It manifests as gum inflammation, bleeding from gums, pain, and burning sensations. From an Ayurvedic perspective, this condition aligns with *Upakusha* or *Dantaveshta*, primarily due to *Kapha* and *Rakta* vitiation (7).

Panchashireesh Agad Choorna, derived from the Shirisha plant (*Albizia lebbek*) parts, is traditionally used for its detoxifying, anti-inflammatory, and healing properties (6). *Pratisaran Chikitsa* is an ancient Indian folk medicine that has been used for a long time to prevent tooth decay, bad breath, bleeding gums, dry throat, cracked lips, and to make teeth, gums, and the jaw stronger (8). Microbiological tests at any clinical studies have revealed that *Pratisaran chikitsa* works especially well for treating tobacco-induced gingivitis (8). *Shireesh* panchanga choorna used for Ayurvedic procedures like *vrana ropaka*, *shothahara*, and *vishahara* etc (4).

Case Presentation (patient information)

The male patient aged 25 years was a factory worker from Pune India. He was a medium built, height of 160 cm, weighing of 60kg. Blood pressure 120/80 mmhg, pulse 80/min, General condition-fair.

2.1 present medical history

The patient presented to the OPD with complaints of bleeding gums, pain in the gums, and a burning sensation in the mouth for the past month. The patient reported a history of tobacco chewing for the last 4 years, consuming approximately 2 pudis (50 gram) per day. Clinical examination revealed signs consistent with tobacco-induced gingivitis, including erythema, gingival inflammation, pain and bleeding on probing.

2.2 history of past illness

There is no history of metabolic disorder like Diabetes Mellitus, thyroid disorder, anemia or affective disorders. No history of any medication ongoing.

2.3 Family History

Family medical history with no evidence of diabetes mellitus, hypertension, or other systemic diseases.

2.4 patient daily routine

The patient's daily routine was noted in detail. He reported waking at 7:30 a.m., followed by light exercise and a shower. Prior to bathing, he habitually consumes one *pudi* of tobacco. Breakfast typically consists of an egg omelette, *poha*, or *upma*, accompanied by a cup of tea. He is working in the factory for at least eight hours daily (10:00 a.m. to 6:00 p.m.), during which he consumes one to two *pudis* of tobacco. The patient has chewing habit is consistently for the past four to five years.

Etiology and physiology of disease

The consumption of daily tobacco is one of the causes of gingivitis (14). Tobacco chewing causes a decrease in gingival inflammation, and chewers have lesser bleeding during bleeding on probing because there is a decrease in the level of

oxygen saturation (10). Nicotine, which is the main constituent of tobacco, has a vasoconstrictive action on the gingival tissues (11).

Tobacco contains nicotine, which has the effects on the oral cavity like:

Nicotine and vasoconstriction (11), oral microbiome alteration (12), immune response modulation (13) and delayed healing at the site of exposure.

3 Treatment protocol

Before starting of treatment There is complete tobacco cessation was advised. After the clinical assessment, we started *Panchshireesh agad choorna* for local application mixed with honey for 2 times (morning and evening) after food over the gums for 5 to 10 min. for 21 days with follow ups on 7th 14th 21th day. The dose of drug vary as the requirement according to the affected area.

Intervention

The Panchashireesh agad choorna is not available as market product Hence the *choorna* prepared from five parts of the *Shireesha* plant (root, bark, leaves, flowers, seeds), was mixed with honey at the time of application.

Assessment Criteria

The following clinical parameters were assessed at each follow-up:

- Bleeding on probing (present or absent)
- Gum pain (Visual Analog Scale)
- Burning sensation (present or absent)
- Gingival inflammation (present or absent)
- Healing of gingival tissues (present or absent)
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- Results

By the 7th day, the patient reported a reduction in pain and burning sensation. By the 14th day, bleeding had significantly reduced, and gingival inflammation had subsided. On the 21st day, the patient exhibited complete relief from symptoms, with healthy gingival appearance and no signs of bleeding or discomfort.

Symptoms	Day 0	Day 7	Day 14	Day 21
Bleeding on Probing (BOP)	PRESENT	PRESENT	ABSENT	ABSENT
Gum pain (VAS)	Moderate	Moderate	Mild	Mild
Burning Sensation	PRESENT	PRESENT	ABSENT	ABSENT
Gingival	PRESENT	PRESENT	PRESENT	ABSENT

inflammation				
Healing of gingival tissue	SLIGHT ULCERATION OVER GINGIVA	HEALING ULCERATION	FRESH MUCOSA APPEARED	HEALING COMPLETELY

Discussion

The therapeutic effects observed in this case align with the known pharmacological actions of *Panchashirish Agad Choorna*. Its anti-inflammatory and antimicrobial properties contributed to the reduction of gingival inflammation and microbial load. The wound-healing potential of *Shireesha* facilitated tissue regeneration. Ayurved states *shireesha* as the best anti toxic drug with *vrnanaropan*. Hence it might be contributed for subsiding the *dantaveshtak* condition induced by tobacco chewing. This case supports the integration of Ayurvedic *Pratisaran* therapy in managing tobacco-induced gingivitis.

4.1. Limitation of case report

While this outcome was observed in a single patient, further research on a larger sample size would be necessary to establish evidence for the significant effectiveness of such dietary product in relieving symptoms of tobacco induced gingivitis

4.2 Strengths

The patient experienced significant relief from tobacco induced gingivitis. This relief was achieved through the *pratisaran* chikitsa by using *panchashireesh agad choorna* with honey for 21 days. Consistent counseling and support from family members played a pivotal role. They maintained the patients adherence to the treatment and encouraged to total tobacco abstinence for healthier lifestyle during treatment period.

Conclusion

Panchashireesh Agad Choorna Pratisaran proved effective in alleviating the symptoms of tobacco-induced gingivitis in this case. The therapy demonstrated significant improvements in gingival healing within 21 days. This case highlights the potential of Ayurvedic interventions as supportive therapies in oral healthcare.

Informed consent

Written informed consent for publication of patients clinical details was obtained from him before initiation of treatment.

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Declaration of generative AI in scientific writing

None.

Conflict of interest

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