



Research Article

Study on the Efficacy of *Durva Siddha Ghritha Gandusha* in Management of *Pittaja Mukhapaka*

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Abstract

Pittaja Mukhapaka (Apthous Ulcer) is an inflammatory condition of the oral mucosa that compromises oral comfort and interferes with routine activities. Its prevalence has increased due to lifestyle factors such as tobacco chewing and smoking. In Ayurveda (the ancient Indian system of medicine), *Gandusha* (therapeutic gargling) is considered a prime measure for maintaining oral health (*Mukha Swasthya*). The present study was undertaken to evaluate the therapeutic efficacy of this classical formulation. A single-group clinical study was conducted on 32 randomly selected participants diagnosed with *Pittaja Mukhapaka* (Apthous Ulcer). The intervention involved *Durva Siddha Ghritha Gandusha* administered for 7 days. Assessments were recorded on the 0th and 7th days to note differences in clinical outcomes, while the 2nd and 5th days were specifically observed for any adverse drug reactions or complications. A post-treatment follow-up was carried out on the 9th day. In addition, literary data were reviewed from *Ayurvedic Samhitas* (classical texts), modern texts, and prior research to substantiate the findings. The results demonstrated significant relief in inflammation and discomfort, highlighting the role of *Gandusha* (therapeutic gargling) in enhancing local circulation, facilitating drug absorption through the oral mucosa, and promoting oral health. The study concludes that *Durva Siddha Ghritha Gandusha* is an effective *upakrama* (therapeutic procedure) in managing *Pittaja Mukhapaka* (Apthous Ulcer), offering a simple, non-invasive and holistic approach to oral care.

Keywords: Aphthous Ulcer, *Durva* (*Cynodon dactylon* (L.) Pers.), *Gandusha* (therapeutic gargling), Oral Health, *Pittaja Mukhapaka*.

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Introduction

Oral health plays a vital role in maintaining overall well-being (1). Poor oral hygiene can significantly impact general health, and many systemic conditions are linked to chronic oral diseases (1,2). To uphold equilibrium, our ancient seers have detailed daily

regimens (*Dinacharya Upakrama*) in the classical texts. These guidelines serve not merely as routines but as rituals to cleanse, rejuvenate, and regulate the body and mind. *Dinacharya* (daily regimen) includes vital practices such as *Nasya* (nasal therapy), *Kavala* and *Gandusha* (oral oil holding and therapeutic gargling), and *Anjana* (collyrium)—all of which are designed to protect and maintain the normal function of the *Indriyas* (sense organs) (3). However, with the relentless pace and imbalances of modern life, the prevalence of lifestyle-related ailments has skyrocketed. One such commonly encountered condition is *Pittaja Mukhapaka* (Apthous Ulcer)—a distressing yet often neglected ailment of the oral cavity, seen across all sections of society. In modern parlance, it closely mimics apthous ulcers or ulcerative stomatitis, which are often recurrent and idiopathic (2,4). Also known as *Sarvasara*

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Mukharoga (Recurrent Aphthous Stomatitis (RAS), this condition results from vitiated *Doshas* (fundamental regulatory principles of physiology), especially *Pitta* (metabolic-inflammatory type), which localize in the *Mukha Pradesha* (oral region) and lead to *Paka* (inflammatory changes), manifesting as ulcers or painful sores (5,6). According to Ministry of AYUSH, ICD code for the *Pittaja Mukhapaka* (Aphthous Ulcer) is NAMC CODE-GG-4 (7). According to the *Charaka Samhita*, *Pittaja Mukhapaka* (Aphthous Ulcer) is classified among the 40 *Nanatmaja Pitta Vikaras* (diseases that arise solely from *Pitta* imbalance, i.e., hyper-metabolic and inflammatory disorders) (8). *Acharya Sushruta*, while elaborating on *Sarvasara Mukharoga* (Recurrent Aphthous Stomatitis) can be further subclassified based on the predominant *doshic* involvement into *Vataja* (neurogenic or functional type) and *Pittaja* (metabolic-inflammatory type) *Kaphaja* (secretory/structural type), and *Raktaja* (hematological /vascular-inflammatory type) (9). *Dalhana*, in his commentary on *Sushruta Samhita*, supports its classification primarily as a *Pitta*-dominant disorder (10). Clinically, patients may present with symptoms such as *Vedana* (pain), *Toda* (pricking or piercing sensation), *Daha* (burning), *Sphutana* (mucosal cracking), and *Antarvrana* (deep-seated ulceration), localized to any part of the oral cavity (11). Lesions can be singular or multiple, and tend to recur without a clearly identifiable etiology (12). The mainstream modern management for aphthous ulcers is largely symptomatic, relying on topical corticosteroids (e.g., 0.1% triamcinolone acetate) and enzymatic mouthwashes (12). However, their prolonged use may pose side effects, prompting the search for safer, cost-effective, and holistic alternatives (12). *Ayurveda*, in this regard, offers a treasure trove of therapeutic options. Time-tested approaches such as *Kavala* (oral oil pulling), *Gandusha* (retentive gargling with medicated oil/ghee), *Kayavirechana* (systemic purgation/therapeutic detox), *Sirovirechana* (nasal cleansing/therapy for systemic regulation), and *Pratisarana* (local application of medicated pastes on lesions) have been prescribed specifically for *Mukhapaka* (oral ulcerative conditions) (13–15). One such formulation is *Durva Siddha Ghrita Gandusha*, frequently mentioned across *Ayurvedic* classical texts for its efficacy in oral pathologies (16,17). *Durva* (*Cynodon dactylon* (L.) Pers.), commonly known as Bermuda grass, enriched with *Madhura*, *Tikta*, and *Kashaya Rasa* (sweet, bitter, and astringent taste profiles corresponding to anti-inflammatory, detoxifying, and tissue-healing effects), *Laghu Guna* (lightness, easy digestibility), *Sita Virya* (cool potency, anti-pitta), and *Madhura Vipaka* (sweet post-digestive effect promoting tissue repair), is renowned for its *Pitta-Kapha Samaka* (anti-inflammatory and anti-secretory) and *Tridosha-hara* (balancing all regulatory systems) properties (18,19). Modern pharmacological studies have corroborated its anti-ulcer, anti-inflammatory, wound-healing, and tissue-regenerative actions (18,19). On the other hand, *Ghrita* (ghee) itself is considered *Vata-Pitta shamaka* (*Vata* and *Pitta* Pacifying), with *Madhura rasa* (sweet taste), *Snigdha guna* (unctuous/oily quality), and *Sita virya* (cool potency), making it highly suitable for ulcerative conditions of the mucosa (20). Hence, the present study, titled "Study the Efficacy of *Durva Siddha Ghrita Gandusha* (therapeutic gargling) in Management of *Pittaja Mukhapaka* (Aphthous Ulcer)", has been undertaken to provide a safer, more sustainable, and holistic approach toward oral health in light of *Ayurvedic* principles.

Aim: Study the Efficacy of *Durva Siddha Ghrita Gandusha* in Management of *Pittaja Mukhapaka* (Aphthous Ulcer).

Objective: To assess the effect of *Gandusha Karma* with *Durva Siddha Ghrita* in reducing the clinical features of *Pittaja Mukhapaka* (Aphthous Ulcer).

Materials & Methods

Materials

Raw Material: *Durva* (*Cynodon dactylon* (L.) Pers.) was procured from a local vendor and authenticated at Sheetal Analytical Laboratory, Flat No. 5, 4th Floor, Sadashiv Peth, Lokmanyanager, Pune, with Authentication Certificate Report No. A.M.-101/01-B-24 dated 02/05/2024.

Formulation Preparation: *Durva Siddha Ghrita* was prepared in the Department of *Rasashastra & Bhaishajya Kalpana Vijnana*, College of Ayurved, Pune.

Standardization: The prepared formulation was standardized at the In-House Quality Control Laboratory, College of Ayurved, Bharati Vidyapeeth (Deemed to be University), Pune.

Drug Supply: The same standardized formulation was dispensed to all study participants.

Trial Registration: The clinical trial was registered under the Clinical Trial Registry of India (CTRI Reg. No: CTRI/2024/03/064602).

Methodology

Study Design: A single-group clinical trial.

Population & Sample Size: According to the data available, the prevalence of *Pittaja Mukhapaka* (Aphthous Ulcer) at Bharati Vidyapeeth (Deemed to be University) College of Ayurved and Hospital, Pune-43 was found to be 1.9%. So the sample size was determined by the formula: $n = [Z^2P(1-P)]/d^2$. Where, n = Sample size, $Z = 1.96$, P = Prevalence rate is 0.02, $d = 0.05$. So, the sample size $N=29+10\%=32$. Considering dropouts total sample size was 32.

Source of data: Patients fulfilling the inclusion criteria were selected for the study from the OPD of Bharati Vidyapeeth (Deemed to be University) College of Ayurved and Hospital, Dhankawadi, Pune.

Procedure Used For Data Collection: A structured clinical proforma was designed, incorporating details of history taking, physical signs, symptoms, and other relevant parameters. Patients meeting the diagnostic criteria of *Pittaja Mukhapaka* (Aphthous Ulcer) were selected using a random sampling method. The enrolled participants were then subjected to the planned therapeutic intervention with *Durva Siddha Ghrita Gandusha* as per the study protocol. Assessment parameters were recorded on the basis of standard method and were analyzed statistically using appropriate test. Patients were subjected to *Ropana Gandusha* (healing type of gargling) for a maximum period of 7 days. Assessments were recorded on the 0th and 7th days to note differences in clinical outcomes, while the 2nd and 5th days were specifically observed for any adverse drug reactions or complications. A post-treatment follow-up was carried out on the 9th day. The assessment parameters were recorded and analysed statistically using Wilcoxon Signed Rank Test.

Inclusion and Exclusion Criteria

Participants aged between 18 and 50 years, irrespective of gender, who were clinically diagnosed with *Pittaja Mukhapaka* (aphthous ulcer) were considered. Individuals presenting with classical *lakshanas* (symptoms) of *Pittaja Mukhapaka* such as *osha* (burning pain), bitter taste in the mouth, and the presence of small eruptions or blisters that were reddish or yellowish in appearance were considered (21,22).

Participants were excluded if *Gandusha* (therapeutic gargling) was contraindicated, such as in individuals who were unconscious, poisoned, debilitated, marasmic, or suffering from bleeding disorders and conjunctivitis (23). Additionally, patients presenting with chronic or carcinogenic ulcers in the oral cavity. Participants with *Pittaja Mukhapaka* secondary to systemic disorders such as syphilis or AIDS. Furthermore, individuals diagnosed with vitamin B12 deficiency or anemia (24,25).

Drug Preparation: The formulation of *Durva Siddha Ghrita* was prepared in accordance with the method described in *Ayurveda Sara Sangraha* (26). **Ingredients:** *Go-Ghrita* (Cow's ghee) - 1 part; *Durva Svarasa* (fresh juice of *Cynodon dactylon* (L.) Pers.) - 4 parts. **Preparation Method (Sneha Paka Vidhi): 1. Extraction of Durva Svarasa:** Freshly collected *Durva* grass was thoroughly washed to remove dirt and impurities, then crushed, and the juice was extracted using a clean cloth. **2. Ghrita Siddhi Process:** *Go-Ghrita* (Cow's ghee) was taken in a clean, thick-bottomed vessel. Four parts of freshly extracted *Durva Svarasa* (fresh juice of *Cynodon dactylon* (L.) Pers.) were added to the *Go-Ghrita* (Cow's ghee). The mixture was heated on a mild flame with continuous stirring. Heating was continued until the appearance of classical *Sneha Siddhi Lakshanas* (signs of proper preparation) (27). The final medicated preparation was carefully filtered and transferred into a clean, dry, air tight glass container for storage.

Standard Operating Procedure of Gandusha (therapeutic gargling) (28–31).: **Purva Karma (Pre-procedure Preparations)** - The participants were made to sit comfortably in erect posture devoid of breeze and sunlight. The shoulders, throat, cheeks and forehead were massaged and fomented. **Pradhana Karma (Main Procedure)**-The participants with concentrated mind and face slightly lifted up were asked to hold the medicated liquid in his mouth without doing any movement inside. Participants were advised not to drink the *Svarasa* (liquid) and hold it until the mouth gets filled with oro-pharyngeal secretions (*kapha*) and watery discharge (*jalasrava*) appears from the nose (*nasa*) and the eyes (*netra*). **Pashchat Karma (Post-procedure Care)**- Glass of Luke-warm water was given for gargling and cleaning of the mouth.

Intervention: Drug: *Durva Siddha Ghrita*.; **Dose:** 20-30ml (as per participants mouth holding capacity); **Kala:** *Pratah kala* (5-7 mins) after *Dantadhavan* (brushing); **Procedure:** *Gandusha* (therapeutic gargling); **Type:** *Ropana Gandusha* (healing type); **Duration of Treatment:** 7 Days; **Follow up:** 2nd,5th,7th Day; **Post Treatment follow up:** 9th Day; **Total Duration of Study:** 9 Days.

Assessment Criteria

The therapeutic outcome was assessed using both objective and subjective clinical parameters related to *Pittaja Mukhapaka* and *Mukhaswasthya*. The evaluated parameters included *Ruja* (pain), size of *Vrana* (ulcer) (32–34), number of *Vrana* (32–35), *Daha* (burning sensation) (32–36), *Raktavarnata* (redness) (34,35,37,38), *Mukhadurgandhata* (foul breath), and *Asyavairasyata* (altered taste perception) (34,36,39,40). Pain intensity was assessed using the Visual Analogue Scale (VAS) (33,34,36,41–44). Ulcer size was measured using a Vernier caliper. All parameters were graded on a four-point ordinal scale ranging from 0 to 3, where 0 represented absence of the symptom and 3 represented maximum severity. The detailed grading criteria for each parameter are presented in Table 1.

Table 1: Grading Parameters of Vrana Assessment

Parameter	Grade 0	Grade 1	Grade 2	Grade 3
Size of Vrana	No ulcer	0–5 mm	6–10 mm	>10 mm
Number of Vrana	No ulcer	1 ulcer	1–3 ulcers	>3 ulcers
Daha (Burning sensation)	No burning	Mild, tolerable without cooling agents	Moderate, relieved by cooling agents	Severe, not relieved by cooling agents
Raktavarnata (Redness)	No redness	Dull red or pink red	Colour of Mazanta	-
Mukha durgandhata	No foul breath for 12 hr after oral cleansing	Foul breath after 6 hr	Foul breath after 3 hr	Persistent foul breath throughout day
Asya vairasyata (Taste)	Normal taste perception	Occasional alteration in taste	Reduced interest in food due to poor taste	Often skips meals due to loss of taste

Observation and Results

Demographic Data: In the study of 30 patients, the majority of cases (60.00%) were in the 20-30 year age bracket. A slightly higher proportion of patients were females (53.33%). Students constituted the highest proportion (43.33%). The most prevalent habit was intake of tea and coffee (43.33%) and a mixed diet was predominant (66.67%). The predominant constitution was *Pittaja-Vataja Prakriti* (33.33%).

Effect on Symptoms: Statistical analysis using the Wilcoxon Signed Rank Test showed a highly significant ($p < 0.000001$) reduction in all assessed parameters after treatment with *Durva Siddha Ghrita Gandusha*.

Table 2: Effect of Durva Siddha Ghrita Gandusha on Clinical Parameters of Pittaja Mukhapaka

Parameter	BT	BT	BT	BT	AT	AT	AT	AT	Wilcoxon	P-Value	%	Result
Ruja (Pain)	6.57	7.00	0.50	0.09	0.70	1.00	0.70	0.13	-4.870	0.0000011	89.34	Significant
Daha (Burning)	2.00	2.00	0.00	0.00	0.30	0.00	0.47	0.09	-5.007	0.0000006	85.00	Significant
Raktavarnata	2.00	2.00	0.00	0.00	0.30	0.00	0.47	0.09	-5.007	0.0000006	85.00	Significant
Size of Vrana	1.73	2.00	0.69	0.13	0.20	0.00	0.41	0.07	-4.916	0.0000009	88.46	Significant
Number of Vrana	2.50	2.50	0.51	0.09	0.20	0.00	0.41	0.07	-4.893	0.0000010	92.00	Significant
Mukhadurgandhata	1.17	1.00	0.38	0.07	0.10	0.00	0.31	0.06	-5.324	0.0000001	91.43	Significant
Asyavairasyata	1.50	1.00	0.63	0.11	0.13	0.00	0.35	0.06	-4.964	0.0000007	91.11	Significant

Illustration No 1: Effect of *Durva Siddha Ghrita* on *Ruja* (Pain) in Management of *Pittaja Mukhapaka*.

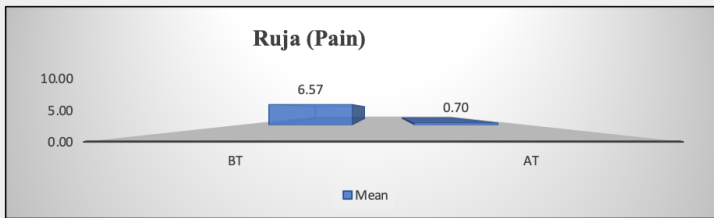


Illustration No 2: Effect of *Durva Siddha Ghrita* on *Daha* in Management of *Pittaja Mukhapaka*.

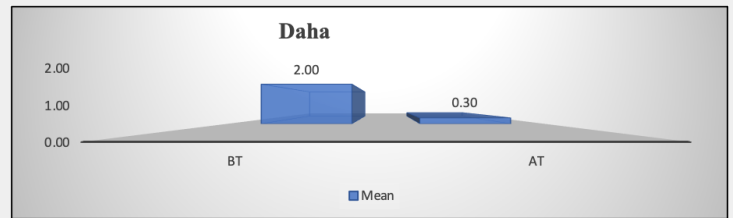


Illustration No 3: Effect of *Durva Siddha Ghrita* on *Raktavarnata* in Management of *Pittaja Mukhapaka*.

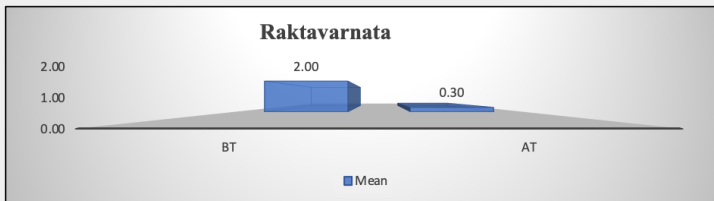


Illustration No 4: Effect of *Durva Siddha Ghrita* on Size of *Vrana* in Management of *Pittaja Mukhapaka*.

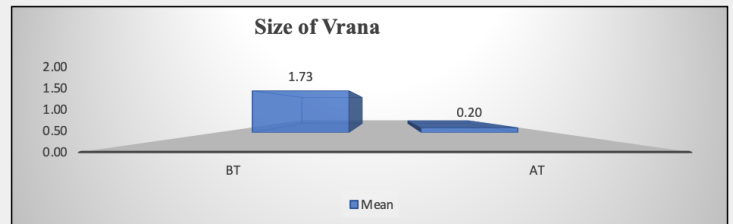


Illustration No 5: Effect of *Durva Siddha Ghrita* on No of *Vrana* in Management of *Pittaja Mukhapaka*.

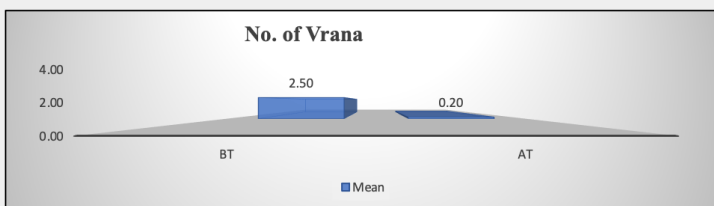


Illustration No 6: Effect of *Durva Siddha Ghrita* on *Mukhadurgandata* in Management of *Pittaja Mukhapaka*.

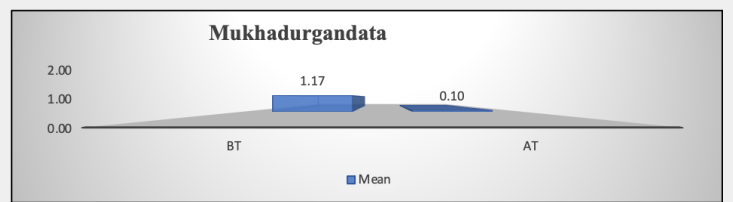


Illustration No 7: Effect of *Durva Siddha Ghrita* on *Asyavairasyata* in Management of *Pittaja Mukhapaka*.

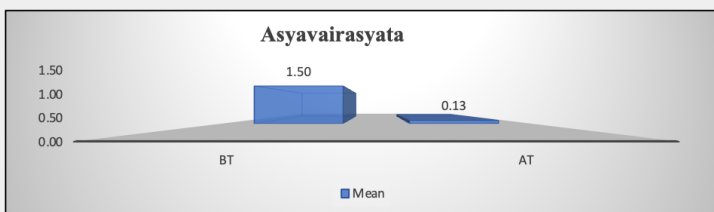
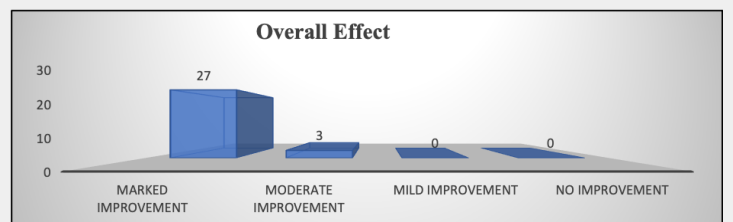


Illustration No 8: Overall Effect of *Durva Siddha Ghrita* in Management of *Pittaja Mukhapaka*.



Discussion

This clinical study highlights the significant efficacy of *Durva Siddha Ghrita Gandusha* in the management of *Pittaja Mukhapaka* (Apthous Ulcer). The findings validate the classical Ayurvedic rationale underlying the selection of this formulation and procedure, with progressive clinical improvements observed throughout the treatment period.

Discussion on the Effect of *Durva Siddha Ghrita* on *Ruja* in *Pittaja Mukhapaka*

The profound reduction in *Ruja* (pain) was one of the earliest and most notable outcomes. Patients reported a significant decrease in the characteristic burning pain (*Daha*) as early as the 2nd day of treatment. By the 5th day, the majority experienced only mild discomfort, and by the 7th day, pain scores had dropped to near-zero. This rapid analgesic (*Vedana Sthapaka*) effect can be correlated with *Durva's* inherent *Shita Virya* (cooling

potency), which directly counteracts the heat of aggravated *Pitta* (25). The *Ghrita* base, acting as a *Yogavahi*, ensured deep penetration (*Sukshma Pravasha*) of these cooling properties to the inflamed nerve endings, providing sustained relief (16).

Discussion on the Effect of *Durva Siddha Ghrita* on *Daha* in *Pittaja Mukhapaka*

The alleviation of the *Tikshna Daha* (intense burning sensation) followed a similar trajectory. The cooling sensation provided immediate, temporary relief during each *Gandusha* session. By the first follow-up (Day 2), patients reported a reduction in the baseline intensity of burning. This effect was consolidated by Day 5, and most participants were completely free from *Daha* by the end of the 7-day treatment. This correlates directly with the *Daha-shamaka* property of *Durva*, which pacifies *Vidagdha Pitta* (24,25,36). The selection of *Ghrita* as the vehicle is pivotal, as its *Snigdha* (unctuous) and *Madhura* (sweet) qualities further soothe the inflamed mucosa (4).

Discussion on the Effect of *Durva Siddha Ghrita* on *Raktavarnata* in *Pittaja Mukhapaka*

The resolution of *Raktavarnata* (redness), a visual marker of inflammation (*Shotha*), was clearly observable. On Day 0, all patients presented with uniform, moderate redness. By Day 5, a visible shift to a pale pink colour was noted, indicating reduced inflammation and improved capillary integrity. This improvement can be correlated with the dual action of *Durva*: its *Raktashodhaka* (blood-purifying) property clears inflammatory mediators from the *Rakta Dhatu*, while its *Shothahara* (anti-inflammatory) action reduces local vasodilation. (24,25,36). *Ghrita's Srotas-shodhaka* property ensures these systemic effects reach the microcirculation of the oral mucosa (4).

Discussion on the Effect of *Durva Siddha Ghrita* on the Size of *Vrana* in *Pittaja Mukhapaka*

The progressive reduction in ulcer size underscores the formulation's potent *Vrana Ropana* (wound healing) capability. Initial assessment showed ulcers with a mean size score of 1.73. Sequential follow-ups revealed a steady decrease, with most ulcers showing significant epithelialization by Day 5 and near-complete healing by Day 7. This can be attributed to *Durva's Kashaya-Tikta Rasa* (astringent, bitter), which promotes *Shodhana* (cleansing) of the ulcer bed, and its *Shita Virya*, which facilitates granulation (24,25,36). Modern studies on *Cynodon dactylon* (L.) Pers. justify its selection, confirming its wound-healing properties by promoting collagen deposition and angiogenesis (45). *Ghrita* provides a protective layer, preventing further irritation and promoting *Dhatu Prashadana* (tissue serenity) (16).

Discussion on the Effect of *Durva Siddha Ghrita* on the Number of *Vrana* in *Pittaja Mukhapaka*

The decrease in ulcer count from a mean of 2.50 to 0.20 demonstrates the formulation's systemic prophylactic action. Notably, the formation of new ulcers ceased after the 2nd day of treatment in most cases. This indicates that the therapy effectively addressed the underlying *Pitta* imbalance, preventing the manifestation of new lesions. This action is correlated with *Durva's Tridosha-shamaka* and *Pitta-pachana* properties, which systemically cool and detoxify the body (24,25,36). The *Yogavahi* nature of *Ghrita* is crucial here, as it carries these systemic corrective actions, arresting disease progression (*Vyadhivivritti-nirodha*) (16).

Discussion on the Effect of *Durva Siddha Ghrita* on *Mukhadurgandhata* in *Pittaja Mukhapaka*

The resolution of foul breath was reported by patients from the 3rd day onwards. This improvement is linked to the *Shodhana* (cleansing) and *Krimighna* (antimicrobial) actions of the formulation. *Durva* cleanses the oral biofilm and putrefied debris, while its antimicrobial properties, attributed to phytoconstituents like flavonoids and alkaloids, reduce the microbial load responsible for odour (4,36). *Ghrita's Srotas-shodhaka* action aids in eliminating toxins from the local tissues, leading to *Sthaniya Dhatu-shuddhi* (local tissue purification) (16).

Discussion on the Effect of *Durva Siddha Ghrita* on *Asyavairasyata* in *Pittaja Mukhapaka*

The correction of altered taste perception was another significant finding. Patients reported a gradual return of normal taste, beginning around Day 4 and normalizing by the post-treatment follow-up. This is correlated with the resolution of oral inflammation (*Mukhagata Shotha-nasha*), which allows the taste

buds (*Rasana*) to function normally. *Durva's Tikta-Kashaya Rasa* helps correct the *Rasa Vikriti* (taste distortion), and the rapid mucosal healing (*Shighra Dhatu-prashadana*) facilitated by *Ghrita* restores the integrity of the gustatory papillae (16,36).

Discussion on the Overall Effect of *Durva Siddha Ghrita* in *Pittaja Mukhapaka*

The overall therapeutic response was assessed by calculating the percentage relief in the total symptom score before and after treatment. The cumulative score of all clinical parameters was recorded for each participant at baseline and after completion of therapy. The percentage improvement was calculated using the formula:

$$\text{Percentage relief} = (\text{BT score} - \text{AT score}) / \text{BT score} \times 100$$

With a recorded 90% improvement in symptom scores, *Durva Siddha Ghrita Gandusha* demonstrated a substantial therapeutic effect against *Pittaja Mukhapaka*. The treatment showed a clear synergistic progression, moving from the rapid relief of *Ruja* (pain) and *Daha* (burning) to the healing of *Vrana* (ulcers). This efficacy is driven by the pharmacodynamics profile of *Durva*: its *sheeta virya* reduces inflammation, its *madhura rasa* and *vipaka* promote mucosal healing, and its *kashaya rasa* acts as a local astringent. Furthermore, using *Ghrita* as a medium via *Gandusha* ensures sustained localized contact, significantly enhancing the formulation's overall clinical impact.

Discussion on Excluded Cases and Reasons for Dropout

Out of the 32 patients initially enrolled in the study, 2 patients developed conjunctivitis during the treatment period while they were continuing the therapy at home. Following the onset of symptoms, they did not return for further treatment or follow-up visits. Consequently, these patients were excluded from the study, and the final analysis was carried out on the remaining 30 patients. Classical Ayurvedic texts advise avoiding *Gandusha* in *Netra rogas*, as the procedure may aggravate ocular symptoms. From a modern perspective as well, increased salivation and possible mild systemic absorption during the therapy could potentially exacerbate conjunctival inflammation. Therefore, considering both safety and ethical principles, these patients were withdrawn from the trial. (23).

Probable Mode of Action

The therapeutic success can be attributed to a confluence of factors:

Drug Action (Dravya Karma): *Durva*, with its *Madhura-Tikta-Kashaya Rasa*, *Shita Virya*, and *Tridosha-shamaka* nature, provides the foundational *Shothahara* and *Vrana-ropana* effects. Modern studies corroborate this, showing *Cynodon dactylon* (L.) Pers. possesses anti-inflammatory, antimicrobial, and wound-healing properties due to its rich composition of alkaloids, flavonoids, and triterpenoids (4,45).

Vehicle Action (Anupana/Bheshaja Karma): *Ghrita* is not merely an inert base; its *Yogavahi* (hat which carries or conveys along with) property enhances the bioavailability of co-administered herbs. Owing to its inherent *Snigdha* and *Shita* qualities, it exerts a soothing (*Shamana*) effect, forms a protective coating over ulcers, and promotes healing—a property also recognized in modern literature on medicated ghee formulations (16).

Procedure Action (Karma Vyapara): The *Ropana Gandusha* (Gargling that helps in healing of ulcers/lesions) procedure played

a pivotal role by ensuring prolonged and intimate contact of the medicine with the entire oral mucosa, thereby maximizing *Aushadha Grahana* (drug absorption). The pre-procedural *Swedana* and *Mardana* further enhanced local *Rakta-sanchara* (blood circulation), optimizing the delivery of active constituents and facilitating the resolution of inflammation (*Shotha-nivarana*) (31,46–49).

Conclusion

The present study was conducted to study the efficacy of Durva Siddha Ghrita Gandusha in the management of Pittaja Mukhapaka (aphthous ulcer) and to assess the effect of Gandusha Karma with Durva Siddha Ghrita in reducing its clinical features. The clinical observations revealed that Pittaja Mukhapaka manifests with symptoms such as Vedana (pain), Daha (burning sensation), and Vrana (ulceration) due to aggravated Pitta Dosh. Administration of Durva Siddha Ghrita through Gandusha Karma (therapeutic oral retention/oil pulling) resulted in significant reduction in the clinical features, including pain, burning sensation, ulcer size and number, Mukha Dourgandhya (foul breath), and Asyavairasyata (taste). The observed therapeutic effect may be attributed to the Pitta-shamaka (Pitta-pacifying), Vrana-ropana (wound-healing), Shothahara (anti-inflammatory), and Dahaprashamana (burn-relieving) properties of Durva Siddha Ghrita. The procedure was found to be safe, simple, economical, and non-invasive, with no adverse effects noted during the study. Hence, the aim and objective of the study were successfully fulfilled, demonstrating that Durva Siddha Ghrita Gandusha is an effective therapeutic modality for reducing the clinical features of Pittaja Mukhapaka (aphthous ulcer); however, further studies with larger sample sizes and longer follow-up are recommended to substantiate and strengthen these findings.

Conflict of Interest: There are no conflicts of interest to declare.

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