A Comprehensive Review on Gunavati Varti: A Classical Ayurvedic Medicated Wick Formulation for Dushta Vrana Management

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***Abstract*—Gunavati Varti is a classical Ayurvedic medicated wick (Varti) formulation indicated for the management of Dushta Vrana (chronic non-healing ulcers) and Nadi Vrana (sinuses). Varti Prayoga, the placement of a medicated wick in a wound, sinus or body orifice, is described throughout the Ayurvedic classics, and Sushruta enumerates Varti among the Shashti Upakramas (sixty therapeutic measures of wound care) as a measure that both cleanses (Shodhana) and heals (Ropana). Gunavati Varti combines herbal and mineral ingredients with a base of Ghrita, Taila and Sikthaka to achieve both effects within a single wick. This review evaluates Gunavati Varti in the light of Varti Prayoga, synthesizing information from classical Ayurvedic treatises, including Sushruta Samhita, Charaka Samhita, Ashtanga Hridaya, Sharangadhara Samhita, Chakradatta, Bhavaprakasha, Raja Nighantu and Rasaratnakara, alongside modern insights into chronic wound management. The pharmaceutical composition, the pharmacological properties (Guna-Karma) of the individual ingredients, the method of preparation and mode of application, and the probable mode of action are systematically analyzed to establish a foundational scientific profile for the formulation.**

***Index Terms*—Dushta Vrana, Gunavati Varti, Shashti Upakramas, Varti Kalpana, Varti Prayoga, Wound Healing.**

I. INTRODUCTION

Bhaishajya Kalpana, the pharmaceutical science of Ayurveda, deals with the preparation, processing, and standardization of various Ayurvedic dosage forms to ensure the safe and effective administration of medicines. Among these forms, Varti a firm, elongated, wick-like preparation introduced into a wound, sinus or body orifice is an early example of a drug-delivery form that is retained at the site of disease. Sharangadhara lists Varti among the synonyms of Vati (Gutika, Vati, Modaka, Vatika, Pindi, Guda and Varti), placing it pharmaceutically within the solid-dosage family[1]. Its route and purpose, however, set it apart: a Vati is swallowed, whereas a Varti is placed at the seat of the disease, where it remains in contact with the tissues, softens with body heat and secretions, and releases its contents locally.

The classical texts describe Varti Prayoga for nearly every accessible route and pay close attention to the size, shape and consistency of the wick. Charaka describes the preparation of Dhumavarti, in which a paste of the drugs is smeared over a reed and shaped like a barley grain, as thick as the thumb and eight Angula long, then dried and the reed withdrawn; its Snaihika variety is compounded with Vasa, Ghrita and Madhuchchhishta (beeswax)[2]. He further describes Phalavarti in Udavarta, Netra Vartis such as Sukhavati and Drishtiprada, and Yoni Varti in Yonivyapat[3], and in Siddhi Sthana specifies dimensions according to the route an anal Varti as thick as the thumb and Yavamadhya (thicker in the middle like a barley grain), and a urethral Varti whose tip equals a mustard seed and whose base equals a black gram, as long as the nozzle, smeared with ghee, soft yet unbreakable[4]. Sushruta likewise describes Dhumavarti, Guda Varti

in Udavarta, Yoni Varti in Karnini Yonivyapat and Anjana Varti of the size of a Harenu seed[5], while Vagbhata reiterates a thumb-thick, Yavamadhya, shade-dried Dhumavarti[6]. Such consistent specification of form according to the anatomy of the site reflects deliberate dosage-form design rather than incidental usage.

Varti Prayoga reaches its fullest development in wound care. Sushruta enumerates Varti among the Shashti Upakramas of Vrana and, together with Kashaya, Kalka, Sarpi, Taila, Rasakriya and Avachurnana, classifies it among the measures that both cleanse (Shodhana) and heal (Ropana)[7]. Its indications are stated precisely: Shodhana Varti for wounds that harbour foreign matter, have minute openings, are deep and are seated in muscle, and Ropana Varti for wounds that are clean and painless but deep[8].

Vagbhata advises Varti for cleansing wounds with narrow openings situated at joints and vital points, counts it among the seven local forms of wound medication, and observes that a sinus disappears when the indicated drugs are used regularly in forms such as Varti[9]. Notably, Charaka's thirty-six Vrana Upakramas do not include Varti as a separate measure[10], suggesting that its systematic place in wound care owes chiefly to the Sushruta school of surgery.

In function, Varti anticipates several modern locally acting dosage forms suppositories, pessaries, ocular inserts and medicated wound packing each of which delivers a drug at its site of action, while wound packing also keeps a cavity or tract open for drainage. Gunavati Varti, a herbo-mineral formulation described in Rasaratnakara for the management of Dushta Vrana and Nadi Vrana[11], stands within this tradition. These conditions are comparable to chronic non-healing ulcers and sinuses, in which healing fails to progress and often remains arrested in a prolonged inflammatory state[12]. The formulation incorporates eight herbal and mineral drugs Sarja Rasa, Lodhra, Ativisha, Haridra, Vibhitaki, Kampillaka, Guggulu and Sindura. Ghrita into a base of Tila Taila and a tenfold proportion of Sikthaka (beeswax), yielding a wick that is firm enough for insertion yet soft and pliable. This base has clear classical precedent, since Sushruta's Snaihika Dhumavarti is built on Madhuchchhishta, Sarja Rasa and Guggulu with Sneha[5], and several of its active ingredients Lodhra, Haridra, Sarja Rasa and Triphala, of which Vibhitaki is a constituent are themselves listed by Sushruta among Vrana-ropana drugs[13]. Gunavati Varti thus unites the Shodhana and Ropana principles of Varti Prayoga in a single wick that can be shaped to the depth of a cavity or tract.

Despite this classical pedigree, clinical evidence on Gunavati Varti remains limited[14], and, to the authors' knowledge, no dedicated review of the formulation has been published. The present article therefore reviews Gunavati Varti in the light of Varti Prayoga, compiling its source, composition and the Guna-Karma of its ingredients, its method of preparation and mode of application, the disease it addresses (Dushta Vrana) and its pharmaceutical aspects as a Varti, and then discusses its probable mode of action.

II. CONCEPTUAL REVIEW

The formulation is reviewed below in four parts: its composition and the Guna-Karma of its ingredients, its method of preparation and mode of application, the disease for which it is indicated (Dushta Vrana), and its pharmaceutical aspects as a Varti.

A. Drug Review: Formulation and Ingredients of Gunavati Varti

Gunavati Varti is formulated from a precise combination of herbal, mineral, and unctuous ingredients as referenced in the Rasaratnakara[11].

1) Pharmaceutical Composition and Proportions

According to classical references, the ingredients and their respective parts by weight are outlined below:

TABLE 01: Proportions of Ingredients in Gunavati Varti

Dravya (Ingredient)	Parts	Dravya (Ingredient)	Parts
Sarja Rasa (*Vateria indica*)	1	Guggulu (*Commiphora mukul)*	1
Lodhra (*Symplocos racemosa)*	1	Sindura (Red Lead, Pb_3O_4)	1
Ativisha (*Aconitum heterophyllum)*	1	Ghrita (Cow Ghee)	1
Haridra (*Curcuma longa)*	1	Taila (Tila Taila / Sesame Oil)	1

Vibhitaki (*Terminalia bellirica)*	1	Sikthaka (Beeswax)	10
Kampillaka (*Mallotus philippensis)*	1	—	—

2) Pharmacological Properties (Guna-Karma) of Key Ingredients

The individual components of Gunavati Varti exhibit complementary pharmacological profiles targeted at ulcer management:

SARJA RASA[15]:

Sarja Rasa is the resinous exudate obtained from the trunk of *Vateria indica* L.

TABLE 02: Gunakarma of Sarja Rasa

Botanical name	*Vateria indica*
Family name	Dipterocarpaceae
Rasa	Kashaya, tikta and katu
Virya	ushna
Vipaka	katu
Guna	Laghu, Ruksha
Doshagnata	Kapha-pitta shamaka
Roganivaraka-Karma	Vrana ropana, shotha-hara, kapha utklesha, vrana shodhaka, asthibhagna Varnya, Svedahara, pandughna

LODHRA[16]:

TABLE 03: Gunakarma of Lodhra

Botanical name	*Symplocos racemosa*
Family name	Symplocaceae
Rasa	Kashaya, Tikta
virya	sheeta
vipaka	katu
Doshagnata	Kapha, Pitta
Guna	Laghu, Rooksha
Rogaghna karma	Grahi, chakushya, raktapittaghna, Raktavikara hara, shothagna, raktastambhaka, vranaropana, balya
Amayika prayoga	Atisara, pravahika, raktapradara, shwetapradara, sarvangashotha, jwara

ATIVISHA[17]:

TABLE 04: Gunakarma of Ativisha

Botanical name	*Aconitum heterophyllum*
Family name	Ranunculaceae
Rasa	Tikta, katu
virya	Ushna
vipaka	Katu
Doshagnata	Kapha, Pitta
Guna	Laghu, Rooksha
rogaghnakarma	Dipana, pachana, arshoghna, krimighna, pitta shamaka, raktashodhaka, raktasthambaka, shothagna, lekhana, vishagna
Amayikaprayoga	Amaatisara, Grahani, Arshas, Jwara, Krimi, Pratishyaya, Shula

HARIDRA[18]:

TABLE 05: Gunakarma of Haridra

Botanical name	*Curcuma longa*
Family name	Zingiberaceae
Rasa	katu, Tikta
virya	Ushna
vipaka	katu
Doshagnata	Kapha, Vata
Guna	Laghu, Rooksha
Rogaghnakarma	Varnya, twakdoshagna, raktadoshahara, shothagna, vranaropana, uttejaka, sugandhi, vishagna.
Amayikaprayoga	Pratishyaya, kandu, pama, arshas, shlipada.

VIBHITAKI[19]:

TABLE 06: Gunakarma of Vibhitaki

Botanical name	*Terminalia bellirica*
Family name	Combretaceae
Rasa	Kashaya
virya	Ushna
vipaka	Madhura
Doshagnata	Tridoshahara
Guna	Laghu, Rooksha
Rogaghnakarma	Bhedana, Keshya, Krimighna, vedanasthapana, shothahara, raktasthambaka, dhatuvardhaka.
Amayikaprayoga	Atisara, daha, shula, shotha, granthi.

KAMPILLAKA[20]:

TABLE 07: Gunakarma of Kampillaka

Botanical name	*Mallotus philippensis*
Family name	Euphorbiaceae
Rasa	Katu
virya	Ushna
vipaka	Katu
Doshagnata	Kapha, Vata
Guna	Laghu, Rooksha, Teekshna
Rogaghnakarma	Raktapittaghna, Krimighna, Rechaka, Vishaghna, Kushtaghna, Vranaropana
Amayikaprayoga	Krimi, daha, kandu, vrana, agnidagdhavrana.

GUGGULU[21,22]:

TABLE 08: Gunakarma of Guggulu

Botanical name	*Commiphora mukul*
Family name	Burseraceae
Rasa	Tikta, katu
virya	Ushna
vipaka	Katu
Doshagnata	Kapha, Vata (Pittala)
Guna	Laghu, tikshna, vishada, snigdha, pichchila, sukshma, sara.
Rogaghnakarma	Rasayana, Vishada, kaphanisaraka, vedanasthapana, sothahara, vranaropana, kushtaghna, varnya.
Amayikaprayoga	Sandhivata, upadamsha, twakvikara, kandu, granthi, shwetapradara,

SINDURA[23]:

TABLE 09: Gunakarma of Sindura

Common name	Girisindhura
Classification	Sadharana rasa
Chemical formula	HgO
Rasa; Virya	Katu, Tikta; Ushna
Guna	Suranga (bright red), Agnisaha, Sukshma, Snigdha, Svachchha, Guru, Mridu
karma	Vrana viropana; alleviates Kushtha, Asra (Raktavikara), Visha, Kandu and Visarpa

TILA TAILA[24]:

TABLE 10: Gunakarma of Tila Taila

Common name	Sesame oil
Veerya	Ushna
Rasa	Madhura (Tikta-Kashaya Anurasa)
Doshagnata	Vata-Kapha shamaka
Guna	Tikshna, Sukshma, Vyavayi, Vishada, Guru, Sara, Vikasi
karma	Shodhana, Lekhana, Krimighna, Tvakprasadana; recommended in wounds, burns and fractures

GHRITA[7,25]:

TABLE 11: Gunakarma of Ghrita

Common name	Cow ghee
Veerya	Sheeta
Rasa	Madhura
Vipaka	Madhura
Doshagnata	Vata pitta shamaka
Guna	Guru, Mridu, Snigdha, Saumya
karma	Agnideepana, Bala-Ojas vardhaka, Varnya, Chakshushya, Vishahara, Rakshoghna; Vrana Shodhana-Ropana (as Sarpi)

SIKTHAKA[26]:

TABLE 12: Gunakarma of Sikthaka

Common name	Beeswax
Veerya	Sheeta
Rasa	Madhura, katu
Vipaka	Madhura
Doshagnata	Vata shamaka
Guna	Snigdha, Pichila, Mrudu.
karma	Krimighna, Vranaropana, Vranashodhana, Kushthahara, Twacha sandhikara

B. Method of Preparation and Mode of Application (Varti Prayoga)

The preparation of Gunavati Varti follows:

Shodhana and Churna Preparation:

Raw drugs should be authenticated and cleaned; those requiring purification, such as Guggulu, are subjected to Shodhana according to classical texts, and the

herbal drugs are dried and powdered finely (Sookshma Churna).

Blending:
The powdered drugs are blended in exact proportions.
Preparation of varthi
Tila Taila, and Sikthaka (beeswax) are heated gently. The herbal powders are incorporated into the molten base under continuous stirring until a uniform, moldable consistency is achieved.

Varti Shaping:
While warm and pliable, the mass is rolled into cylindrical wicks (Yavakruthi) of appropriate length and diameter suited for insertion into sinus tracts or chronic ulcers.

Varti Prayoga (Mode of Application):
Following the classical procedure of Varti application, the ulcer is first washed with a suitable decoction and dried; the Varti is then introduced into the cavity or sinus tract to its depth, and the wound is covered, padded and bandaged[27,28]. The Varti is renewed at each dressing, its length and thickness being matched to the depth and calibre of the tract.

C. Disease Review: Dushta Vrana (Chronic Non-Healing Ulcer)
In Ayurvedic classics, Vrana is defined as the structural destruction or discontinuity of body tissues (Gaatra Vichurnane) that leaves a permanent scar (Vrana Vastu) even after healing[29]. When a wound is neglected, exposed to improper diet and lifestyle (Apathya Ahara-Vihara), or complicated by deep-seated vitiation of Tridosha (Vata, Pitta, Kapha) and Rakta, it progresses into Dushta Vrana[30].

Clinical Features[31]:
Dushta Vranas are characterized by severe pain (Teevra Vedana), foul odor (Durgandha), excessive or purulent discharge (Pooti Srava), discoloration (black, dark red, or yellow), raised or undermined edges, and delayed healing features those closely parallel modern descriptions of chronic non-healing ulcers (such as diabetic, venous, and pressure ulcers).

Pathogenesis (Samprapti):
The pathogenesis involves local stasis of vitiated doshas and blood at the site of tissue trauma (Khavaigunya), leading to localized inflammation (Vrana Shopha), suppuration (Paka), and tissue breakdown (Bheda).

Modern Perspective:
Such chronic wounds consume considerable healthcare resources worldwide, and their management rests on infection control, debridement and appropriate local wound care to prevent complications such as sepsis and limb loss[12].

D. Pharmaceutical Aspects of Gunavati Varti
Gunavati Varti is a Varti Kalpana: a solid or semi-solid preparation rolled into an elongated form that is thicker in the middle and tapers towards the ends (Yavakriti), classified under Vati Kalpana[1,32]. Of the two classical ways of preparing a Varti grinding the drugs with a liquid medium such as Gomutra or plant latex and rolling the mass into shape[3,33], or incorporating fine powders into a molten base of wax and Sneha Gunavati Varti follows the second. Its base of Ghrita and Tila Taila, consolidated with a tenfold proportion of Sikthaka, makes the wick firm enough to be introduced into a cavity or tract yet soft and pliable, and the mass sets on cooling instead of being dried in shade as paste-based Vartis are[6]. In keeping with the classical practice of sizing a Varti to its site[4], the length and thickness of each wick are matched to the depth and calibre of the wound or sinus tract. Once inserted, the Varti interacts with wound exudate and gradually releases its constituents, exerting local purification (Shodhana), antimicrobial (Krimighna) and healing (Ropana) effects.

III. DISCUSSION AND THERAPEUTIC RATIONALE

The clinical effectiveness of Gunavati Varti in managing Dushta Vrana stems from a seamless alignment between traditional Ayurvedic pharmacodynamics and contemporary wound-healing mechanisms:

Moisture Regulation and Debridement:
The lipid base of Taila and Ghrita, consolidated with Sikthaka (beeswax), helps maintain a moist wound-healing environment while preventing dressings from adhering to delicate tissues. Concurrently, Tikshna and Krimighna ingredients such as Kampillaka may assist

in loosening necrotic slough and reducing the microbial load.

Infection Control and Anti-Inflammatory Effects:
Chronic ulcers are frequently complicated by resistant bacterial strains and prolonged, stagnant inflammation. Haridra, Ativisha and Sindura are described in the classics as Krimighna, Vishaghna, Shothahara and Vranaropana (Tables 04, 05 and 09) properties that correspond to antimicrobial and anti-inflammatory actions and may therefore help to suppress bioburden without injuring healthy, emerging granulation tissue.

Tissue Regeneration and Granulation:
The Kashaya Rasa of Lodhra and Sarja Rasa both listed by Sushruta among Vrana-ropana drugs together with Haridra and Triphala[13] is credited with Sandhaniya (tissue-uniting) and Ropana actions; in contemporary terms, these may support granulation, collagen deposition and progressive wound contraction.

Clinical Outlook:
A randomised controlled clinical study reported that Gunavati Varti performed better than dressing with Jatyadi Taila in clearing necrotic debris and accelerating tissue recovery in chronic non-healing ulcers[14]. Nonetheless, rigorous, multi-centric, blinded clinical trials with extended patient follow-up are essential to validate these findings and standardize its use in modern practice.

IV. CONCLUSION

Gunavati Varti exemplifies the classical principle of Varti Prayoga in an advanced pharmaceutical design, integrating targeted botanicals and minerals into a lipid-based, sustained-release local delivery system. By addressing the core pathophysiological hurdles of chronic non-healing ulcers (Dushta Vrana) specifically through coordinated wound purification (Vrana Shodhana) and accelerated tissue regeneration (Vrana Ropana) this formulation offers a mechanistically plausible, multi-modal therapeutic option.
Future investigations should prioritize rigorous preclinical pharmacodynamic profiling, standardized quality control parameters, and well-designed, multi-center, randomized controlled trials (RCTs) to validate its clinical efficacy and safely integrate it into evidence-based international wound care protocols.

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