

An Integrative Ayurvedic Perspective on Hidradenitis Suppurativa: Nosological Correlation with Nadivrana and Proposal of a Stage-Wise Therapeutic Protocol

Dr.Gaurihar Sarakale¹, Dr. Suketha Kumari²

¹ PG Scholar, Department of Kayachikitsa, KAHER's Shri BMK Ayurveda Mahavidyalaya, Belgavi, Karnataka, India. <https://orcid.org/0009-0001-9972-9058>

² Professor, Department of Kayachikitsa, KAHER's Shri BMK Ayurveda Mahavidyalaya, Belgavi, Karnataka, India. <https://orcid.org/0000-0003-1648-5180>

ABSTRACT

Hidradenitis Suppurativa (HS) also known as Acne Inversa is a chronic, recurring, inflammatory dermatomal disorder of apocrine gland bearing areas that is characterized by painful subcutaneous nodules, abscess, sinus tracts/fistulae, and scarring. Current conventional therapies which includes antibiotics, biologics and surgery are often unsatisfactory with recurrent recurrence and psychosocial impact. This review explore the links between HS and Ayurvedic classical entities Nadivrana, review available Ayurvedic case reports on HS. Evidence suggests that approaches involving Ksharasutra, topical Kshara and medicated oils and internal Ayurvedic formulations based on Nadivrana chikitsa principles can give the better results. Considering the pathophysiology of HS, which progresses from follicular occlusion to chronic inflammation, sinus formation and fibrosis, an integrative Ayurvedic protocol is proposed as a rational therapeutic model. Ayurvedic management appears promising, cost effective and well accepted among patients, though robust clinical studies with larger sample sizes are required to confirm long term outcomes.

Keywords: Hidradenitis Suppurativa, Acne Inversa, Ayurveda, Nadivrana, Integrative Approach

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INTRODUCTION

Hidradenitis Suppurativa (HS), also known as acne inversa or Verneuil's Disease, is a chronic and suppurative skin disorder. It typically presents as deep, tender subcutaneous nodules, abscesses, sinus tract formation, and eventual scarring. [1] The estimated prevalence of HS in studied populations is around 1%, though point of prevalence may vary widely (0.3-4.1%) depending on region and its methodology. [2] The onset is typically in early adulthood; the chronicity, recurrent painful lesions, and foul smelling discharge often result in significant physical discomfort with psychosocial burden, loss of productivity and deranged quality of life. [3]

Though exact pathophysiology is complex and multifactorial, current understanding emphasizes follicular occlusion of hair follicle/ pilosebaceous-apocrine unit as the primary event which followed by rupture and activation of innate and adaptive immune response

which persistent inflammation further leads to abscess formation, sinus tracts/fibrosis/ scar tissue.[4] as of now known risk factors include smoking, obesity, genetic predisposition and hormonal factors. [5] Conventional management includes antibiotics, anti-inflammatory agents, biological and surgical interventions for resistant cases. [6] However, side effects and costs especially for biological are substantial. Chronic progression, and risk of relapse remains the major challenges in HS management. [7]

The chronic, relapsing, and distressing nature of HS and limitations of current treatments there is need to explore alternative/ complementary medical systems. Ayurvedic texts describe chronic non healing, suppurative skin disorders under the categories such *Nadivrana*, *Vidradhi*, *Apachi*, *Dushtavrana*, *Kushta*, etc. The ancient parasurgical treatments *Ksharasutra*, Topical Kshara/ taila, Internal medications, cleansing therapies may offer holistic benefits including removal of unhealthy tissue,

detoxification, promotion of healing, and prevention of recurrence. [8] Hence, this manuscript attempts to correlate HS with classical Ayurvedic nosology, review prior Ayurvedic clinical experiences, and propose a structured integrative management protocol which useful for future clinical research and trials.

METHODOLOGY

Several Ayurvedic authors consider HS analogous to Nadivrana due to similarity in deep abscesses, sinus tract formation, chronicity, suppuration with scarring. [9] A article titled “Ayurvedic management of Hidradentits Suppurativa” describes a case of HS with painful mucopurulent abscesses over axillae and buttocks. Using shodhana (purification) and Visa chikitsa principles with internal medications, authors reported resolution of discharge and odor and reduction in lesion thickness. [10]

A small case series published in 2022 applied para surgical intervention (Ksarasutra) plus internal

medications on two HS patients. The authors noted the beneficial outcomes. [11] In another report, para surgical management using *Ksharasutra* along with topical therapy (Ksharataila) and adjuvant internal Ayurvedic medicines, was used in perianal HS and noted that complete recovery within 2 months and no recurrence over 2 years follow up. [12] A recent 2025 publication (International Journal of Ayurveda and Pharma Research) documented a case managed using Ayurveda medicines with favorable outcomes. [13]

While these case reports/ series are encouraging, they suffer from certain limitations like very small sample size, lack of long follow up. Lack of standardized outcome measures and absence of controlled comparative studies. There is clear need for larger, systematic observational or interventional studies using a standard Ayurvedic protocol with defined outcome measures and follow up.

Proposed Integrative Ayurvedic Treatment Protocol for HS:

Table no.1: Proposed Integrative Ayurvedic Treatment Protocol for HS

Phase & Therapeutic Aim	Ayurvedic / Integrative Intervention	Scientific & Classical Rationale	Expected Outcome Parameters
Phase I: Śodhana & Debridement (Elimination of Doṣa, pus, necrotic tissue)	Para-surgical intervention: • Kṣārasūtra application to sinus tracts/fistulae • Medicated seton for continuous drainage • Weekly replacement till tract closure	Nadīvrana is described as a chronic suppurative tract requiring <i>chedana</i> , <i>bhedana</i> and <i>lekhana</i> procedures. Kṣārasūtra causes controlled chemical cauterization, debridement, antimicrobial action, and gradual fibrosis of the sinus tract, analogous to modern seton therapy used in chronic HS sinuses.	• Reduction in purulent discharge • Sinus tract closure • Pain reduction (VAS) • Absence of abscess recurrence
Phase II: Local Śamana & Vraṇa Ropana (Inflammation control & wound healing)	Topical therapy: • Warm sitz bath / local cleansing • Apāmārga Kṣāra Taila / Jatyādi Taila application	Kṣāra Taila possesses <i>lekhana</i> , <i>śodhana</i> and <i>krimighna</i> properties, useful in chronic infected wounds. Jatyādi Taila promotes granulation, epithelialization, and reduces inflammation, correlating with modern wound-healing principles.	• Decrease in erythema & induration • Healthy granulation tissue • Reduced local tenderness
Phase III: Systemic Śamana Chikitsā (Correction of internal pathology)	Internal medications (individualized): • Kaṣāya (e.g. Patolakadurohinyadi Kaṣāya) • Gūlikā / Vaṭi (e.g.	HS involves chronic inflammation, immune dysregulation, and suppuration, correlating with <i>Pitta-Kapha dominant Nadīvrana with Viṣa-like</i>	• Reduced frequency of flare-ups • Decreased lesion size • Improved

	Tharunabhāskara Gūlikā, Nagvangeswar Rasa, etc) • Doṣa-specific formulations	<i>pathology</i> . Internal medicines support agni, detoxification, immune balance, and tissue repair.	general health
Phase IV: Pathya–Apathya& Lifestyle Modulation (Prevention of recurrence)	• Weight management • Avoidance of friction, tight clothing, shaving • Smoking cessation • Pathya diet and stress reduction	Obesity, smoking, and mechanical friction are established risk factors for HS. Ayurveda emphasizes <i>nidānaparivarjana</i> to prevent chronicity and recurrence.	• Reduced disease severity • Improved Dermatology Life Quality Index (DLQI)
Phase V: Monitoring & Long-term Follow-up (Assessment & relapse prevention)	• Weekly to monthly follow-up • Assessment of nodules, discharge, scarring • Quality-of-life evaluation	HS is chronic and relapsing, requiring long-term monitoring. Ayurvedic success is assessed by <i>apunarbhava</i> (non-recurrence) and restoration of normal tissue architecture.	• Sustained remission • No new sinus formation • Long-term patient satisfaction

Table no.2 Herley’s Stage based Integrative Ayurvedic protocol for HS

Hurley Stage	Clinical Features	Ayurvedic Correlation	Preferred Integrative Ayurvedic Management	Key Objective
Stage I	Single or multiple painful nodules or abscesses; no sinus tracts or scarring	<i>Pitta-Kapha dominant Vidradhi / early Nadīvrana</i>	• Śamana chikitsā (internal kaṣāya, gūlikā) • Local lepa / taila application • Pathya–apathya& lifestyle correction	Reduce inflammation, prevent progression
Stage II	Recurrent abscesses with limited sinus tract formation and scarring	<i>Established Nadīvrana</i>	• Kṣārasūtra for sinus tracts • Kṣāra Taila / Jatyādi Taila locally • Systemic Śamana medicines	Tract closure, control suppuration
Stage III	Diffuse involvement, multiple interconnected sinus tracts , extensive scarring	<i>Chronic, bahu-nādi Nadīvrana with duṣtamāṃsa</i>	• Repeated Kṣārasūtra / para-surgical debridement • Long-term internal chikitsā • Strict nidānaparivarjana& follow-up	Disease control, relapse prevention, QoL improvement

DISCUSSION

HS is now currently classified as a chronic, immune mediated inflammatory disease. It is distinguished by follicular occlusion, dys-regulated cutaneous immunology with persistent chronic inflammation which further leads to sinus tract development and fibrosis. However, therapeutic advances, including biologics and surgical interventions disease management remains evasive for substantial proportion of patients with high recurrence rate as well as considerable psychological burden. These limitations highlight the need for complementary and integrative therapeutic

protocols that target both local disease mechanisms and systemic contributors to chronicity.

The current review posits a conceptual and clinical relationship between HS and *Nadīvrana*. The characteristic features of HS- deep seated abscesses, persistent discharge, interconnected linked sinus tract, fibrosis and scarring are closely similar the classical description of *Nadīvrana* in Susruta Samhita.[14] This correlation offers coherent theoretical foundation for applying Nadīvrana chikitsa principles to the integrative management of HS.

Ksharasutra therapy is a key component of the proposed protocol. It is traditionally indicated for *Nadivrana* involving established sinus tracts. *Ksharasutra* provides controlled chemical cauterization, promotes continuous drainage and aids in tract closure. This mechanism akin to modern seton based approaches used in chronic fistulizing disease. Published Ayurvedic case reports and small case series shows positive outcomes such as reduction in discharge, pain relief, sinus closure and low recurrence. Although these findings are preliminary data, they imply that potential therapeutic role of *Ksharasutra* in Hurley stage 2 and 3 HS.[15]

Local wound therapy using Ksarataila and Jatyaditaila is adheres to modern wound healing principles, such as debridement, infection control and encouragement of granulation and epithelialization. Systemic Ayurvedic interventions aims to rectify underlying metabolic and immune dysregulation conceptualized in Ayurveda as impaired agni- dosha imbalance (Predominantly Pitta-Kapha dosha). This systemic approach is especially important in HS, where disease severity is impacted by metabolic variables, such as obesity, smoking and chronic low grade inflammation. An essential aspect of this evaluation is the alignment of Hurley staging with Ayurvedic therapeutic decision making. [16] Such stratification improves clinical applicability and facilitates personalized care. Moreover, focus on *Nidana parivarjana*, lifestyle adjustment and long term follow up resonates with today's contemporary understanding of HS as chronic, recurrent condition requiring sustained multidisciplinary care.

Nonetheless, the existing data supporting Ayurvedic interventions in HS remains limited due to methodological restrictions, including small sample size, unavailability of standardized outcome measures such as HiSCR or DLQI, lack of comparator arms. These limitations prevent definitive conclusions regarding efficacy and necessitate cautious interpretation of existing data.

CONCLUSION

Hidradenitis suppurativa is a complicated, chronic inflammatory condition with significant unmet treatment requirements. The close clinical and pathological similarities between HS and *Nadivrana* provide a robust conceptual framework for incorporating Ayurvedic principles into HS management. Preliminary clinical evidence data suggests that *nadivrana* based interventions particularly *Ksharasutra* therapy, adjuvant local wound care, systemic Ayurvedic medications and life style adjustment may provide significant clinical benefits, especially in patients with recurrent advanced stage of HS.

The proposed integrative, stage based Ayurvedic protocol provides a rational, holistic and potentially cost

effective alternative to conventional management. Despite this, its clinical relevance must be demonstrated through well designed prospective clinical trial studies employing standardized disease severity indicators, QOL measures and long term follow up. Future research on HS should focus on integrative clinical trials that systematically evaluate its safety, efficacy and patient centric outcomes.

In summary, Ayurveda when implemented within evidence informed integrative framework, Ayurveda shows its potential as complementary strategy in multidisciplinary care of hidradenitis suppurativa, necessitating further rigorous scientific investigation.

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