

An Ayurvedic Approach In The Management Of Hidradenitis Suppurativa (Hs) - A Single Case Report

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ABSTRACT:

Hidradenitis Suppurativa (HS) is a chronic infective and fibrous disease of the skin bearing apocrine sweat glands. Hidradenitis suppurativa is characterized by painful nodules, abscesses, draining dermal tunnels, and scarring with predilection for intertriginous sites, such as the axilla, groin, and breast regions etc. A retrospective analysis of a population based sample reported the prevalence of HS to be 0.1%; gender- based estimates suggest that the average annual incidence is 12.1% per 100,000 among women, more than twice the average annual incidence of men (5.1 per 100,000).⁽¹⁾ The disease tend to become chronic with subcutaneous extension leading to indurations, sinus and fistula having a profound impact on the quality of life. The clinical features of HS can be compared with *Naadivrana* mentioned in Ayurveda classics. The treatment modalities of *Naadivrana* includes mainly *Shodhana* and *Ksara Sutra* application are adopted in the present case. In modern system of medicine there are no curative (medical) therapies for HS, only symptomatic treatment can be done. This includes adjuvant therapy (e.g., pain management, smoking cessation, weight loss, treatment of super infections, hygiene practises, topical wound dressings) to topical and systemic agents (e.g., antibiotics, anti-inflammatory agents, anti-androgen drugs) and surgical interventions such as excisional surgery and laser surgery. In the present case *Shodhana Chikitsa* along with *Ksharasutra prayoga* followed by *Shamanaushadis* were administered in the course of 3 sittings. Patient was completely cured from sign and symptoms of hidradenitis suppurativa. Hence the protocol adopted here is said to be unique drug formulation in the treatment of Hidradenitis Suppurativa

Keywords: Hidradenitis Suppurativa, *Naadivrana*, *Shodhana*, *Kshara Sutra*

INTRODUCTION:

Hidradenitis suppurativa, is most commonly seen in axillae, inguinal, perianal and perineal region often extended to the thigh^[2] having chronic, inflammatory, recurrent, skin disease of the hair follicle. This is usually presents after puberty with painful, deep-seated, inflamed lesions in the apocrine gland-bearing areas of the body. In mild cases the disease will be presented as recurrent isolated nodules while in severe chronic instances the clinical scenario will be chronic inflammation leading to scarring contractures, keloid and rarely squamous cell carcinoma. Though there is no exact aetiology mentioned for the disease there are various theories such as hormonal factors, genetic predisposition and infective pathology leading to disease manifestation. The blockage occurs when sweat is trapped inside sweat gland tubes, which eventually swell up and either burst or become severely inflamed. Additionally, as proved by medical research, there is a link between. In Modern system of medicine there is no gold standard protocol in the management of Hidradenitis suppurativa but is rather a combination of antibiotics and ultimately surgery.⁽³⁾

DIAGNOSTIC CRITERIA:

1. Typical Topography - axilla, groin, perianal region and infra mammary region.
2. Typical Lesions i.e. deep-seated painful nodules, abscesses, fistular, bridged scars.

Classification and monitoring disease severity:

The Hurley classification (grade I through III) is a well-known and commonly used system to express disease severity by determination of the character and the extensiveness of the lesions.⁽⁴⁾

Hurley I

Localized disease.

Single or multiple abscesses.

No sinus tracts or scarring.

Hurley II

Recurrent abscesses.

Single or multiple sinus tracts and

scarring.
 Lesions separated by healthy skin.
 Hurley III
 Multiple interconnected abscesses and sinus tracts.
 Involvement of the entire affected area.

In Ayurvedic texts no direct reference to Hidradenitis Suppurative is found. But in *Susrutha Samhita* there is description regarding 8 types of *Naadivrana*, whose clinical features can be compared with HS. ⁽⁵⁾

CASE REPORT:

A 24 years old male visited to Kayachikitsa OPD of JSS Ayurveda Medical College with the complaints of Painful, Pus-filled, Large, Multiple eruptions in Groins, Face and B/L Axillary region since 2 months.

HISTORY OF PRESENT ILLNESS:

As per the statement of the patient he was apparently healthy 2 months back, he gradually developed Painful, Pus-filled, Large, Multiple eruptions in Groins, Face and B/L Axillary region. At first Painful and Pus-filled eruptions was noticed in Right Axillary region, later it was Spread to Groins and Face. Pus Discharge and Pain aggravates during night time and Pain and Pus discharge relieves after taking analgesics and Antibiotics. But the Pain and Pus discharge reoccurred. For these above-mentioned complaints he consulted nearby physician and took medication, there he was diagnosed as **HIDRADENITIS SUPPURATIVA**. He took Antibiotics, Analgesics and other medications but he did not find any satisfactory relief, the condition became very progressive. Day by Day the Pus-filled eruptions started to spread to face and groins. So, he approached JSS Ayurveda Medical Hospital for further Management.

HISTORY OF PAST ILLNESS:

N/K/C/O Diabetes mellitus, Hypertension and other systemic disorders.

PERSONAL HISTORY:

Ahara- Shakhara, Untimely food intake, intake of junk food
Vihara –Avara-(Sedentary)
Vyasana – Daily intake of junk food, like pizza, french-fries and other fried junk foods
Nidra – Disturbed Sleep
Mala– once a day(constipated).
Mutra – 3-5 times @ day time.

FAMILY HISTORY: All Family members are said to be healthy.

SURGICAL HISTORY: NIL

GENERAL EXAMINATION:

BP- 110/80 mm of hg
 Pulse- 78/min
 Temperature – Afebrile
 R/R – 18/min
 Blood Pressure-130/80mmhg
 Pallor – Absent
 Icterus – Absent
 Cyanosis -Absent
 Clubbing- Absent
 Koilonychia- Absent
 Oedema- Absent

Table No.1 ASHTASTANA PARIKSHA

<i>NADI</i>	<i>Pitta-Kapha</i>
<i>MALA</i>	Once a day (constipated)
<i>MOOTRA</i>	3-5 times@ day time
<i>JIHWA</i>	<i>Lipta</i>
<i>SHABDHA</i>	<i>Prakruta</i>
<i>SPARSHA</i>	<i>Prakruta</i>

<i>DRIK</i>	<i>Prakruta</i>
<i>AKRITI</i>	<i>Madhyama</i>

Table No.2 DASHAVIDHA PARIKSHA

<i>Prakriti</i>	<i>Vata Pitta</i>
<i>Vikriti</i>	<i>Pitta Kapha</i>
<i>Sara</i>	<i>Mamsasara</i>
<i>Samhanana</i>	<i>Madhyama</i>
<i>Pramanaa</i>	<i>Madhyama</i>
<i>Satmya</i>	<i>Madhyama</i>
<i>Satva</i>	<i>Madhyama</i>
<i>Ahara Shakti</i>	<i>Madhyama</i>
<i>Vyayama Shakti</i>	<i>Madhyama</i>
<i>Vaya</i>	<i>Madhyama</i>

SYSTEMIC EXAMINATION:

RESPIRATORY SYSTEM.:

NVBS Heard, No added Sound.

CARDIO VASCULAR SYSTEM:

S1 S2 Heard, No Murmurs.

GASTRO INTESTINAL TRACT:

Soft and non-tender, No organomegaly.

MUSCULOSKELETAL SYSTEM:

All Range of movements are possible without pain.

NERVOUS SYSTEM EXAMINATION:

Patient was conscious & well oriented to time, place & person.
 Higher Mental functions were intact.

INTEGUMENTARY SYSTEM EXAMINATION:

Rt Axillary Region

on Inspection-

Multiple –Abscess of Irregular Shape and Size
 Mucopurulent Pus discharge- Whitish Red from all Abscess

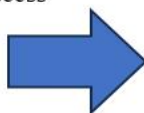
On Palpation –

Localised rise in Temperature noted.

Tenderness – Grade 3

Multiple Intercommunicating Sinus Tract-noted

Dense Fibrous Tissue - Present



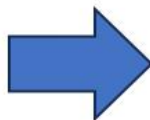
GROINS

on Inspection-

Multiple –Abscess of
 Irregular Shape and Size
 Mucopurulent Pus discharge- Whitish Red from all Abscess

On Palpation –

Localised rise in Temperature -noted.
Tenderness – Grade 4
Multiple Intercommunicating Sinus Tract-noted
Dense Fibrous Tissue - Present



LEFT AXILLARY REGION

on Inspection-

2-3–Abscess of Irregular Shape and Size
 Mucopurulent Pus discharge- Whitish Red from all Abscess

On Palpation –

Localised rise in Temperature noted.
Tenderness – Grade 2
Multiple Intercommunicating Sinus Tract-noted
Dense Fibrous Tissue - Present



Face

on Inspection-

1-2 Abscess of Irregular Shape and Size
 Mucopurulent Pus discharge- Whitish Red from the Abscess

On Palpation –

Localised rise in Temperature - noted.
Tenderness – Grade 2

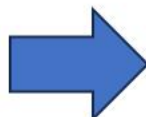


Table No.3

FIRST COURSE (1 /09 / 2022 TO 13 /09 / 2022)=14 days	
<i>Snehapana with Panchatiktaka Guggulu Gritha and Maha kalyanaka Gritha</i> for 6 days (4/09/2022 TO 9/09/2022)	<i>Sarvanga Abhyanga with Yashtimadu taila</i> followed by <i>Bashpa Sweda</i> for 3 days (10/09/2022 TO 12/09/2022)
<i>Sarvanga Kashaya Seka with Dashamoola Kashaya+Panchavalkala Kashaya+Neem Leaves</i> for 7 days (1/09/2022 TO 7/09/2022)	<i>Virechana</i> with <i>Trivruth lehya</i> (50g) for 1 day (10Vegas) (12/09/2022)
<i>Shirodhara</i> with <i>Dashamoola Kashaya</i> for 2 days (10/09/2022 TO 11/09/2022)	Primary threading was done on 12/09/2022
<i>Sarvanga Lepa with Manjishtadi Choorna+Triphala Choorna+Nimba Choorna+Madhu+Dashanga Lepa+Karanja Leaves</i> with warm water for 10 days (1/09/2022 TO 10/09/2022)	<i>Ksharasutra</i> ligated on 14/09/2022
<i>Jalaukavacharana</i> to both Arm pit and Groins for 2days (1leech to both arm pit and 2 leeches to groins) ((10/09/2022 TO 11/09/2022)	Daily dressing done

Table No.4

SECOND COURSE (03/11/2022 TO 12/11/2022)= 10 days	THIRD COURSE (21/12/2022 TO 26/12/2022)
<i>Snehapana with Panchatikthaka Guggulu Gritha+Maha kalyanaka Gritha</i> for 7 days (03/11/2022 TO 09/11/2022)	<i>Jalaukavacharana</i> to both Arm pit and Groins for 4days (23/12/22 to 26/12/2022)
<i>Jalaukavacharana</i> to both Arm pit and Groins for 5 Alternative days (from 03/11/2022 to 11/11/2022)	<i>Sarvanga Kashaya Seka</i> for 4 days (21/12/22 to 22/12/2022)
<i>Sarvanga Abhyanga</i> with <i>Yashtimadu taila</i> followed by <i>Bashpa Sweda</i> for 3 days (10/11//2022 to 12/11/2022)	<i>Kshara Sutra</i> was changed every week for a duration of 4 months
<i>Virechana</i> with <i>Trivruth lehya</i> (40g) for 1 day (12Vegas) (12/11/2022)	

Table No.5- ORAL MEDICATIONS

SHAMANA CHIKITSA AFTER FIRST COURSE (14/09 / 2022 TO 2 /11 / 2022)	
<i>ManjishtadiKashaya</i> (15ml)+ <i>Khadirarishta</i> (15ml) with 40ml warm water After food	Tablet <i>Triphala Guggulu DS</i> (2Tab)+Tablet <i>Kanchanara Guggulu DS</i> (2Tab)+ <i>Yashtimdu Churna</i> for External application
<i>Panchatiktaka Guggulu Gritha</i> (5ml)+ <i>Triphala Gritha</i> (5ml) at 7.30am before food	<i>Yashtimadu taila</i> for External Application
Tablet <i>Arogyavardhinivati</i> 1BD After food	Tablet <i>Triphala Guggulu DS</i> 2BD After food
Tablet <i>Gandhaka Rasayana</i> 2BD After food	Tablet <i>Radona</i> 2BD After food

Table No.6

SHAMANA CHIKITSA	
AFTER SECOND COURSE (17/11 / 2022 TO 20 /12 / 2022)	AFTER THIRD COURSE (27/12 / 2022 TO 1 /2 / 2023)
Tablet Radona 2BD After food	<i>Manjishtadi Kashaya</i> (20ml)
<i>Panchavalkala Lepa</i> for External Application	Tablet Radona 2BD After food
	<i>Panchatikthaka Guggulu Ghrita</i> 1tsp After food at bed time.
	Syrup Purodil 10ml BD After food
	<i>Trivruth Lehya</i> (10ml) Before food in empty stomach

OBSERVATIONS AND RESULTS

BEFORE TREATMENT



RIGHT AXILLA



LEFT AXILLA



GROINS



FACE

AFTER FIRST COURSE OF TREATMENT



RIGHT AXILLA



LEFT AXILLA



GROINS

AFTER SECOND COURSE OF TREATMENT



RIGHT AXILLA



LEFT AXILLA



GROINS

AFTER THIRD COURSE OF TREATMENT



RIGHT AXILLA



LEFT AXILLA



GROINS



FACE

RESULTS

After 3 courses of treatment of therapy with both internal and external medication, he got complete relief in complaints like Painful, Pus-filled, Large, Multiple eruptions in Groins, Face and B/L Axillary region. At the end of 3rd course patient was completely relieved from the complains and there was no sign of formation of new pustular tracts and abscess. Clinical assessments were made from the subjective symptoms & The Hurley classification grading for determination of the character and the extensiveness of the lesions. Before treatment there was Hurley grade III and after 3 courses of treatment it came to Hurley grade I. The result were seen in a span of 4 months with 3 courses of treatment. There is no sign of any recurrence since 1 year.

DISCUSSION:

Hidradenitis suppurativa is a painful formation of channels commonly called as sinus tract. A long standing hidradenitis suppurativa usually requires surgical excision which commonly perform under general anaesthesia. According to *Ayurvedic* literature *Nadivrana* can be correlated with HS on the basis of sign and symptoms. *Acharya Susrutha* has mentioned *Prakshalana*, *Shodhana* and *Ksharasutra* in the management of *Nadivrana*⁽⁶⁾. *Pitta* and *Kapha* aggravation is considered a primary factor in the pathogenesis of HS.

Virechana karma directly targets *Pitta dosha* by eliminating excess heat and toxins from the body, cooling and detoxifying the system. This helps reduce inflammation. *Kapha* dosha is balanced by reducing blockages in the channels and liquefying the viscous, mucous-type accumulations that lead to abscesses. *Virechana* is also considered to cleanse the Rakta dhatu and eliminate *Ama* from the body. Skin diseases like HS are often associated with impurities in the blood in *Ayurveda*, and *Virechana* helps purify the blood, aiding in the resolution of chronic inflammation and infection⁽⁷⁾. HS is driven by chronic inflammation, primarily involving the innate immune system and the release of pro-inflammatory cytokines (such as TNF-alpha, IL-1, IL-17). *Virechana* in *Ayurveda* which cools down *Pitta*, can be compared to modern approaches that reduce inflammation, such as the use of biologics targeting these cytokines⁽⁸⁾. There is growing recognition in modern medicine of the gut-skin axis, where gut health impacts skin conditions like HS. *Ayurveda* has long established a connection between digestion (*Agni*) and skin health, and therapies like *Virechana* improve gut function, which may support this axis⁽⁹⁾. HS is sometimes linked with hormonal imbalances, particularly in androgens. *Pitta*-related conditions in *Ayurveda* often correlate with hormonal dysregulation. Role of *Virechana* in balancing *Pitta* could help indirectly regulate hormone-related triggers of HS.⁽¹⁰⁾ *Acharya Sushrutha* has explained *upanaha*, *prakshalana*, *kshara taila poorana* and *kshara sutra prayoga* in the treatment of *nadivrana*. As per *Sushrutha*, *kshara karmukata* is *lekhana*, *dahana*, *pachana*, *tridoshagna* and *vishesha kriyakarana*⁽¹¹⁾. *Ksharasutra* is prepared using herbal alkalis such as *Apamarga Kshara*, which has strong debridement properties. It promotes the gradual excision of necrotic tissue while maintaining a clean wound bed. HS is characterized by chronic, deep sinus tracts that harbor dead tissue and bacteria. Debridement action of *Ksharasutra* is ideal for keeping these tracts clean and facilitating proper healing.

Table No.7

APAMARGA		
SLNO.	PHYTO CONSTITUENTS	MODE OF ACTION
1	Aponin ⁽¹²⁾	<ul style="list-style-type: none"> It has Anti-inflammatory properties that inhibits the production of pro-inflammatory mediators like prostaglandins and cytokines. The anti-inflammatory action can help in reducing swelling and inflammation at the wound site, aiding the healing process.
2	chelerythrine and achyranthine ⁽¹³⁾	<ul style="list-style-type: none"> Antibacterial, Anti-inflammatory - help combat infections at the wound site & help reduce swelling and redness around the wound.
3	Quercetin and Kaempferol ⁽¹⁴⁾	Anti-inflammatory and Analgesic effect <ul style="list-style-type: none"> They act by inhibiting the production of inflammatory mediators like prostaglandins and cytokines, which help reduce pain and swelling. Antioxidant Property <ul style="list-style-type: none"> It reduces oxidative stress at the wound site, supporting the healing process.
4	Ellagic acid and gallic acid ⁽¹⁵⁾	Antioxidant, Anti-inflammatory, and Analgesic. <ul style="list-style-type: none"> It reduces the inflammatory response at the wound site and protect against oxidative damage, thus promoting faster healing and offering pain relief.
5	Beta-sitosterol ⁽¹⁶⁾	Anti-inflammatory and Analgesic <ul style="list-style-type: none"> It has been shown to inhibit pro-inflammatory cytokines and reduce pain by modulating the immune response and offering natural pain relief at the site of injury.
Snuhi Ksheera (Latex of Euphorbia neriifolin)		
SLNO.	PHYTO CONSTITUENTS	MODE OF ACTION
1	Nerifoliol ⁽¹⁷⁾	Anti-Inflammatory, Analgesic, And Wound-Healing Effects

		<ul style="list-style-type: none"> • It reduces oxidative stress, there by aiding in tissue repair and regeneration • It inhibits pro-inflammatory pathways, reducing inflammation and pain, which is crucial for managing inflammatory conditions and promoting healing
2	Euphol⁽¹⁸⁾	Anti-inflammatory, Analgesic, Antimicrobial, and wound-healing <ul style="list-style-type: none"> • It helps in tissue regeneration and act as natural antimicrobial agents, making them valuable for preventing infection at the site of wounds or abscesses. • The anti-inflammatory effects reduce pain and swelling, while their antimicrobial properties help combat bacterial infections.
3	Di- and Tri-Terpene Esters⁽¹⁹⁾	Antimicrobial And Anti-Inflammatory <ul style="list-style-type: none"> • These compounds inhibit the growth of various pathogens, making the latex effective in preventing infections in wounds. • These terpenes exhibit potent anti-inflammatory effects, which are essential in managing inflammatory disease conditions.
4	1-Inositol⁽²⁰⁾	Antioxidant, anti-inflammatory and Wound healing <ul style="list-style-type: none"> • It reduces oxidative stress, improve cellular function, and alleviate inflammation. • It also plays a role in enhancing the healing process by supporting cellular repair mechanisms and modulating immune response, which is vital in wound healing and managing conditions like pilonidal sinus.
5	Pyrogallic and Catechuic Tannins⁽²¹⁾	Antimicrobial, Wound Heal Astringent, And Anti-Inflammatory Properties <ul style="list-style-type: none"> • They help in reducing the risk of infection at wound sites, promoting wound contraction, and accelerating the healing process. • Their astringent nature is particularly beneficial in reducing bleeding, while their antimicrobial properties help prevent the growth of bacteria in open wounds.
6	Xanthorhamnin Alkaloid⁽²²⁾	Antioxidant, anti-inflammatory and Wound healing <ul style="list-style-type: none"> • It has anti-inflammatory and analgesic effects that contribute to reducing pain and swelling at the infection site, thus promoting faster recovery. • It demonstrates strong antimicrobial activity, making it useful in treating infections, particularly those caused by resistant bacteria.
HARIDRA		
SLNO.	PHYTO CONSTITUENTS	MODE OF ACTION
1	Curcumin⁽²³⁾	Anti-Inflammatory, Analgesic, Antibacterial, Antioxidant, And Wound-Healing <ul style="list-style-type: none"> • Curcumin exerts its anti-inflammatory effects by inhibiting pro-inflammatory cytokines and enzymes such as COX-2, TNF-α, and IL-6. • Its antioxidant activity helps in neutralizing free radicals, reducing oxidative stress, and protecting cells from damage.
2	Turmerones (α- and β-turmerone)⁽²⁴⁾	Anti-Inflammatory, Antimicrobial, And Wound-Healing <ul style="list-style-type: none"> • It helps to reduce the inflammation and pain associated with the condition while also preventing bacterial infections in the wound.

3	Turmeric Essential Oils⁽²⁵⁾	Antibacterial, Antifungal, Anti-Inflammatory And Wound Healing <ul style="list-style-type: none"> • These oils also possess wound-healing properties, enhancing tissue regeneration and reducing infection risks.
4	Polysaccharide⁽²⁶⁾	Immunomodulatory, Anti-Inflammatory, And Antioxidant <ul style="list-style-type: none"> • These polysaccharides help stimulate the immune system, making them useful in treating infections and promoting faster recovery from wounds. • They also assist in reducing inflammation and oxidative damage.
5	Catechins⁽²⁷⁾	Antioxidant And Anti-Inflammatory <ul style="list-style-type: none"> • They help reduce oxidative damage and inflammation, promoting tissue healing and preventing further complication.

Thus **kshara sutra** causes irritation and inflammation in the tract, resulting in the necrosis and shedding of the bad granulation tissue. Fibroblastic proliferation occurs which contain spindle shaped fibroblasts with tapered ends which form a fibrin network. Thus it helps in complete healing.⁽²⁸⁾

Jalaukavacharana primarily reduces the *Pitta* and *Kapha doshas*, which are often associated with inflammatory skin conditions like hidradenitis suppurativa. It does so by promoting detoxification, improving circulation, reducing inflammation, and alleviating congestion. It also helps in balancing *Vata dosha* indirectly by improving blood circulation and reducing the dryness and roughness of the skin. Thus helps to reduce local venous congestion and promote lymphatic drainage.

Action of leech is due to the biological substances present in saliva. This saliva contains more than hundred bioactive substances, which includes an anti platelet aggregation factor, anaesthetic, and anti-inflammatory and antibiotic agents.. These agents anaesthetize the wound area making the bite of leech painless to its host and dilate blood vessels to increase blood flow to the site of bite.⁽²⁹⁾

Table No.8

SL.NO	PHARMACOLOGICAL EFFECT	MODE OF ACTION
1	Anti-inflammatory Effects⁽²⁹⁾	<ul style="list-style-type: none"> • Leech saliva contains bioactive compounds like hirudin, hyaluronidase, and bdellins, which possess potent anti-inflammatory properties. These substances inhibit pro-inflammatory mediators such as cytokines (TNF-α, IL-1, IL-6), thereby reducing inflammation in conditions like HS, where inflammation of hair follicles and sweat glands occurs. • The reduction of local inflammation can lead to decreased flare-ups and symptomatic relief in patients with HS.
2	Antibacterial Effects⁽³⁰⁾	<ul style="list-style-type: none"> • The antimicrobial properties of leech saliva, particularly the action of proteinases and other bioactive molecules, may help reduce bacterial colonization in infected lesions. • Since HS is often complicated by bacterial infections (e.g., <i>Staphylococcus aureus</i>), leech therapy may help control bacterial growth and promote healing.
3	Vaso dilation Effect⁽³¹⁾	<ul style="list-style-type: none"> • Leech therapy enhances local blood circulation through its action as a vasodilator. The release of substances like histamine and bradykinin from leech saliva can lead to the dilation of blood vessels, improving perfusion and promoting the delivery of oxygen and nutrients to the affected tissues in HS patients. • This may aid in wound healing and reduce the formation of abscesses and scarring.
4	Analgesic Effect⁽³²⁾	<ul style="list-style-type: none"> • The analgesic effects of leech therapy are linked to the presence of anaesthetic peptides in the saliva, such as calin and delins, which act locally at the site of application. • These peptides help to reduce pain and discomfort associated with the recurrent abscesses and inflammation characteristic of HS.

5.	Anti Fibrotic Effect⁽³³⁾	<ul style="list-style-type: none"> • In chronic HS, fibrosis and scarring contribute to the development of sinus tracts and abscesses. Leech therapy may help mitigate these processes by reducing the deposition of collagen and promoting tissue regeneration. • The enzyme hyaluronidase in leech saliva breaks down extracellular matrix components, which may reduce scar tissue formation and improve tissue remodelling.
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Shirodhara provides a comprehensive approach in managing sleep disturbances and anxiety in patients with Hidradenitis Suppurativa. *Shirodhara* induces a relaxation response by stimulating the parasympathetic nervous system (PNS), which counteracts the sympathetic nervous system (SNS) that is typically activated during periods of stress. By enhancing the activity of the PNS, *Shirodhara* helps to reduce cortisol (the stress hormone) levels, which in turn decreases the overall stress and anxiety experienced by patients with HS.

By activating the parasympathetic nervous system, *Shirodhara* promotes a deep state of relaxation, which helps in inducing sleep. It lowers the level of adrenaline and cortisol, two hormones responsible for wakefulness and stress, creating an environment conducive to restful sleep. ⁽³⁴⁾ The therapy reduces stress hormone levels like cortisol while promoting the secretion of sleep-related hormones like melatonin. *Shirodhara* improves circulation and lymphatic drainage, which supports the delivery of oxygen and nutrients to tissues, including the skin. Enhanced circulation also helps in detoxification, indirectly reducing inflammatory responses and improving overall health, which contributes to better sleep and reduces anxiety.⁽³⁵⁾

Initially to reduce *Kapha Avarana Rookshana chikitsa* like *Sarvanga Kashaya Seka* and *Sarvanga Lepa* was administered.

Table No.9

SL.NO	PHARMACOLOGICAL EFFECT	MODE OF ACTION
1	Anti-inflammatory effects⁽³⁶⁾	<ul style="list-style-type: none"> • Dashamoola and Panchavalkala have proven anti-inflammatory effects. These <i>dravyas</i> contain bioactive compounds that inhibit the production of pro-inflammatory cytokines and enzymes such as COX-2 and lipoxigenase, reducing inflammation in the affected skin areas. • Neem Leaves also exhibit anti-inflammatory properties by blocking the release of TNF-α (tumour necrosis factor) and IL-6 (interleukin-6), which play a central role in the inflammatory process of HS
2	Antibacterial and Antifungal Action⁽³⁶⁾	<ul style="list-style-type: none"> • Neem Leaves are renowned for their antibacterial and antifungal properties, making them especially useful in preventing and managing secondary infections in the abscesses and lesions common in HS. • Neem helps to combat <i>Staphylococcus aureus</i>, a bacteria often implicated in skin infections associated with HS
3	Detoxification and Immune Modulation⁽³⁷⁾	<ul style="list-style-type: none"> • The combination of Dashamoola and Panchavalkala aids in Ama removal by stimulating sweating and enhancing lymphatic drainage, thus improving the body's metabolic function and clearing blockages. This helps in reducing the internal heat and balancing the Pitta dosha, which is often aggravated in HS

Lepa contained drugs like *Manjishta* (*Kaphagna, Shothagna, Raktashodhaka*), *Karanja Patra* (*Shothahara, Kaphavata shamaka*), *Nimba* (*Pittakaphakara, Shothahara*) *Dashanga Lepa* (*Kushtagna*), *Triphala* (*Kaphapittaghna*). All the *dravyas* which are used in the lepa procedure acts as *kaphapitta shamaka, raktashodhaka, Shothahara* and helped in relieving *kaphaavarana*.

Panchatikta guggulu ghrita's reference from *Bhaishjyaranavali Kushthrogadhikara*. The main contents of this drug are *Panchatikta gana dravyas, ghrita & Guggulu*. So probable mode of action of *Panchatikta guggulu ghrita* can be said as all contents are having *tikta rasa, laghu & ruksha guna*, so it acts as anti-itching property, *kleda & vikruta meda upashoshana, vranashodhaka*.⁽³⁸⁾ It mainly acts on *kleda, meda, lasika, rakta, pitta, sweda & shleshma*.⁽³⁹⁾ *Nimba* has chemical composition of Nimbin, Nimbidin possesses significant dose dependant anti-inflammatory activity & significant anti ulcer effect⁽⁴⁰⁾. *Guduchi* having Berberin & tinosporin mainly acts as anti-oxidant & immune-potentiating thus cell layers during disease pathology are improved by this drug⁽⁴¹⁾. *Vasa* the Vascicinone has anti-histaminic property as well as it is anti-oxidant & anti-inflammatory⁽⁴²⁾. *Patola* has anti-oxidant⁽⁴³⁾ & *Nidigdika* has anti-histaminic property⁽⁴⁴⁾.

Guggulu has excellent property to act on *vikruta kleda & meda*, *mamsa dhatu* as it has *Katu, Tikta, Kashaya, Madhura rasa, Ushna veerya & katu Vipak* ⁽⁴⁵⁾. *Guggulu* stimulates body activity to build up immune system.

Mahakalyanaka ghrita mentioned in *Ashtanga Hridaya Uttaratantra*, in *Unmada rogadhikara*, is a Polyherbal combination which includes 31 ingredients. It has *Madhura Rasa, Sheeta Veerya, Madhura Vipaka. Doshaghna* of the *ghrita* is *Vaat-Pitta Prashamana & Vishaghna, Rakshogha, Vayasthapana* as *Prabhava*. Majority of the ingredients in *Mahakalyanaka ghrita* are having Anti-inflammatory, Antioxidant, Neuroprotective and Immunomodulatory action. *Kapikacchu* is one the key ingredients. It mainly contains L-Dopa as one of the main bio component. It suppresses the release of pro-inflammatory cytokines like **TNF-alpha** and **IL-1**, reducing the severity of inflammation. It helps to balance the **Th1/Th2 immune response**, which is dysregulated in inflammatory skin conditions like HS. It supports wound healing and regeneration by promoting collagen production. By this collagen synthesis it helps to heal damaged skin more rapidly and reduce scarring. *Kapikacchu* has dopaminergic effect through the action of L-Dopa which helps to reduce stress by promoting dopamine production, which supports mood regulation. As stress is one of the key causative factors for HS, It helps to relieve the stress and improve the mood ^{(46),(47),(48),(49)}. *Panchatikthaka guggulu ghrita* and *Mahakalyanaka Ghrita* were given in form of *Yamaka Sneha*. These *Ghritas* have lipophilic action so helps in ion transportation to a target organ. This lipophilic nature of *Ghrita* facilitates entry of drug in to cell & it's delivery to mitochondria, microsome & nuclear membrane. Also it helps in restoring the normal texture to skin. So all these properties acts mainly at cellular level of skin decreasing keratinization of cell layer thus improving cell cycle as a result giving normal texture to skin. ⁽⁵⁰⁾

Yashtimadhu taila was used for *sarvanga Abhyanga*. It has *Madhura rasa, Guru-Snigdha guna, Madhura vipaka, Vatapitta-shamaka*. It mainly contain Glycyrrhizin & Liquiritin as two of the key ingredients which acts as anti-inflammatory, antioxidant, immunomodulatory and also exhibit wound tissue regeneration activity. ⁽⁵¹⁾

Arogyavardhinivati was given in BD dose after *shodhana chikitsa*. It has *Katu tiktha rasa, Laghu, ruksha guna, Anushna sheeta veerya, Katu vipaka* and acts as *Deepaka, Pachaka, Kledahara* and *Raktashodhaka*. ⁽⁵²⁾⁽⁵³⁾ Phyto constituents like Chebulinic acid, Quercetin, ellagic acid, gallic acid and fulvic acid of *Arogyavardhinivati* acts as Anti-inflammatory, Antioxidant, Immunomodulatory, Antimicrobial property which helps in reducing inflammation and oxidative stress and promote wound healing in HS. ⁽⁵⁴⁾

Gandhakarasayana mainly contain *Gandhaka* (Purified sulphur) as one of the key ingredient. *Gandhaka* is *Ushna Veeryatmaka* and *Katu Rasa Vipaki* so acts as best *Kaphaghna* and *Kledaghna*. It acts as *Raktashodhaka* and *srotoshodhaka* and can be indicated in all *twakvikaras*. It acts on *Raktadhatu* and acts as *raktashodhaka*. It also acts as *rasayana* and helps in improving *Agni* and *Pachana kriya* of a person. ⁽⁵⁵⁾ It has antibacterial, Antimicrobial, Anti-inflammatory, detoxifying and wound healing property which promotes keratinization and enhances the repair of damaged skin, which is vital in managing the recurrent abscesses and fistulas seen in HS. ⁽⁵⁶⁾ Tablet *Triphala Guggulu DS* (2Tab)+Tablet *Kanchanara Guggulu DS* (2Tab)+*Yashtimadhu Churna* were applied externally in the form of *lepa*, which acts in the form of *rukshana chikitsa* and helped in removing *kaphaavarana*.

Triphala Guggulu consists of *Amalaki, Haritaki, Vibhitaki, Pippali* and *Guggulu*. Majority of the *Triphala Guggulu* constituents contain *Tikta, Kashaya, Madhura Rasa, Ushna Virya, Katu Vipaka, Laghu, Ruksha, Ushna, Tikshna Gunas, Tridosahara*, and *Shothahara karma*. It relieves *Kapha dosha* due to *Tikta, Kashaya Rasa, Laghu, and Ruksha Guna*. It reduces *Vata* and *Kapha dosha* due to *Ushna Virya*. *Pitta dosha* is relieved by the drug's *Tikta, Kashaya, and Madhura Rasa*. It activates *Agni* due to its *Ushna Virya* and *Laghu, Ruksha Guna*, and reduces *Srotorodha* due to its *Ushna, Tikshna, Laghu Guna, and Ushna Virya*. ⁽⁵⁷⁾ *Triphala Guggulu*, contains more *Guggulu* than the other ingredients listed, So *guggulu* which contains phytoconstituents such as Guggulsterones (E- and Z-isomers), Sesquiterpenoids (Commiphoric acid), triterpenoids (friedelin) work synergistically to provide powerful anti-inflammatory, antimicrobial, detoxifying, and immune-modulating effects. These properties are highly beneficial in managing chronic inflammatory skin diseases like Hidradenitis Suppurativa, where inflammation, infection, and toxin accumulation are key factors in disease progression. ⁽⁵⁸⁾

Manjishtadi Kashya mainly contain *Manjistha, Haritaki, Vibhitaki, Amalaki, Katuki, Vaca, Devadaru, Haidra* and *Nimba Twak*. It has *Tikta, Katu Rasa, Laghu Ruksha Guna, Usna Virya, Agnidipaka, Raktashodaka, Sramsana, Pitta Kaphahara, Kustaghna*. ⁽⁵⁹⁾ Phytoconstituents like Alizarin, Rubicordifolin, Quercetin, Purpurin acts as anti-inflammatory, antibacterial, detoxifying, and immune-modulating properties, making it effective in treating Hidradenitis Suppurativa (HS). ⁽⁶⁰⁾

Khadirarishta mainly contain *Khadhira, Devadaru, Bakuchi, Daruharidra, Haritaki, Vibhitaki, and Amalaki*. It has *Tikta Kashaya, Katu rasa, Katuvipaka, Ushna veerya, Pitta Kaphashamaka, Vranaropaka, Kandugna* and *Krimighna* properties. ⁽⁶¹⁾ Catechins, quercetin, kaempferol, Curcumin, Chebulagic acid work synergistically to reduce the inflammation, infection, and skin lesions associated with Hidradenitis Suppurativa (HS). The anti-inflammatory,

antimicrobial, immune-modulating, and blood-purifying properties of these ingredients make *Khadirarishta* an effective Ayurvedic remedy for managing and alleviating symptoms of HS.⁽⁶²⁾

Tablet Radona mainly contain *Khadhira*, *Manjishta*, *Nimba*, *Katuki*, *Vanga Bhasma* and *Yashadha Bhasma* as key ingredients. It has strong astringent, antioxidant and antimicrobial property, which seems to be responsible for wound contraction, granulation tissue formation and increased rate of epithelialization. Thus Tablet Radona was an effective Ayurvedic remedy for managing the inflammation, infections, pain, and skin lesions associated with HS.⁽⁶³⁾

Syrup Purodil is an proprietary medicine, mainly contain *Manjishta*, and *Khadhira*, *Nimba*, *Bakuchi*, *Katuki* ingredients which acts as *pitta kapha shamana*, *Raktashodhaka*. It has anti-inflammatory, Antimicrobial, Antifungal and Anti-Bacterial property which helps to improve blood circulation and help in wound debridement.⁽⁶⁴⁾

Trivrith lehya (1tsp) was given in empty stomach every day. *Trivruth lehya* mainly contain *Trivrith* as the main ingredient which is *Madhura*, *Tikta*, *Katu Rasa*, *Ruksha Guna*, *Ushna Virya* and *Katu Vipaka*. *Madhura Tikta* and *Kashaya Rasas* are *Pitta Shamaka* in nature they are *Soumya Rasas*. *Katu*, *Tikta* and *Kashaya Rasas* will cause *Kapha Shamana* and *Trivrit* being *Sukha Virechana Dravya* it causes *Vata Anulomana*, thus its mainly *Kapha Pitta Hara* and at the same time *Tridoshashamaka*. *Trivrith* with its *Ushna Virya* and *Katu*, *Tikta*, *Kashaya Rasas* does *Ama Pachana* and *Agni Deepana* at the level of *Annavaha Srotas*. By its *Tikshna* and *Laghu Gunas*, it reaches the minute channels and removes *Sanga* that which is main *Sroto Dusti* in *Anaha* and *Vibandha* and it also does *Dosha Vilayana*. And when *Doshas* reach the *Koshta* it increases the *Kosta Gati* and it being *Sukha Virechana Dravya* expels out *Doshas* from *Adhobhaga* in *Drava* form. Thus, the *Vata Anulomana* will also be attained simultaneously relieving *Anaha* and *Vibandha*. It is directly indicated in *Nadivrana*, *Vrana*, and *Krimi*.⁽⁶⁵⁾ *Trivrith lehya* mainly contain *Trivrith* as the key ingredient which contain Turpethi as key phytoconstituent which acts as purgative, anti-inflammatory, antimicrobial, and detoxifier which make it a useful adjunct in the treatment of inflammatory skin conditions like Hidradenitis Suppurativa, where managing inflammation, detoxifying the body, and preventing secondary infections are key to improving symptoms.⁽⁶⁶⁾

CONCLUSION:

As Hidradenitis Suppurativa (HS) is one of the relapsing inflammatory diseases, apart from temporary symptomatic treatment and Surgery there are no curative Treatment for HS in the Contemporary medical science. Present case of Hidradenitis Suppurativa (HS) has been managed with Classical Ayurveda treatment and there was a marked improvement in the course of 4 months and there was no recurrence since 1 year. The findings in this single case study have provided a strong hope and a choice for better management of Hidradenitis Suppurativa (HS). However, some randomized clinical trials with large sample sizes are validated to reproduce similar results.

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This review article discusses the purgative, anti-inflammatory, and detoxifying properties of *Operculina turpethum*, emphasizing its traditional use in Ayurvedic medicine for managing inflammatory skin conditions, including those like HS.