

A Siddha Management of *Attai vidal* with internal and external medicines for *Naalavibatha Punn* (Varicose Ulcer): A Case Report

Case Report

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Abstract

According to various classical Siddha literature, the varicose ulcer is compared with the symptoms of *Naalavibatha punn* / *Naalaurrutu punn* / *Naalaviruvu punn*. Treat varicose ulcers by prescribing Siddha internal medicines and external therapies. On August 5, 2022, a 48-year-old female patient attended the OPD of Santhigiri Siddha Medical College and Hospital, Trivandrum, with the following complaints: dilatation of veins, present in the right lower limb for 6 years; hyperpigmented lesion with itching and swelling above the medial malleolus of the right lower limb for 6 months; and an ulcer present above the medial malleolus for the last 3 months. She had a known case of varicose veins and had taken sclerotherapy three times but did not have satisfaction with the allopathic medication. The majority of the symptoms were significantly reduced in 60 days under the Siddha medications, such as a combination of Siddha preparation (*Parangipattai Chooranam*, *Sangu Parpam*, and *Silasathu Parpam*), *Rasa gandhi mezhugu* for internal, *Padikara neer* washing, wound dressing with *Mathan thailam* for external for 2 months, and *attai vidal* (leech application) done in 3 sittings in the gap of 10 days. No recurrence of any chronic varicose ulcer was observed during the 1 year of follow-up, and relevant preventive Siddha medication for *Naalavibatha punn* was given. The doctor advised the patient to do exercises that strengthen the legs and compression therapy. To summarize, the case report exhibited that Siddha leech therapy with both internal and external medications is very effective in the management of varicose ulcers.

Keywords: Varicose ulcer, *Naalavibathapunn*, *Attai vidal*, Siddha medicines, External therapy.

Introduction

Sloughing out of inflamed necrotic tissue causes an ulcer, which is the discontinuance of the mucous membrane, epithelium, or skin. In modern science, varicose ulcer is one of the ulcer types (1). Nowadays, varicose ulcers are present in the majority of patients who are diagnosed with varicose veins. Patients with varicose veins tend to focus less on correct treatment and avoid preventative measures, which can lead to the development of varicose ulcers (2). The most prevalent type of leg ulcer is varicose. Men in their middle years are more likely to have it, as are those from middle-class socioeconomic backgrounds. It has an impact on 1% of India's total population. An estimated 600,000 people suffer from venous ulcers, and as the elderly population grows, this number is expected to rise (3).

Varicose veins present with the symptoms of leg heaviness, itching, cramps, mild tenderness, discoloration of the skin, intolerance of exercise, and fatigue in the legs. On physical examination, it may reveal visible distended veins from the thigh to the ankle of one or both lower limbs. Varicose ulcers are categorized into four categories using the VCS Score (Venous Clinical Severity Scoring System) (5).

According to classical Siddha literature, the varicose ulcer is compared with the symptoms of *Naalavibatha punn* (*Naalaurrutu punn* or *Naalaviruvu punn*). It is characterized in Siddha as per the T.V. Sambasivam Pillai Dictionary: The cause of *Naalavipatham*, *Naalaurrutu* or *Naalaviruvu* is a blockage in the flow of blood, which results in the creation of knot-like structures with twisted and swollen veins in the lower limbs (6).

In AYUSH, S stands for the Siddha system of medicine. Nowadays, people with varicose ulcers approach alternative medicines to get a cure without surgical interventions and avoid the recurrence of ulcer formation. Both internal and external medicines were prescribed in the treatment of the *Naalaurrutu punn/Naalaviruvu punn* (varicose ulcer or stasis ulcer). Herein the details of the *Nalalauruttu punn* (varicose ulcer) case study have been presented, which is

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successively treated with Siddha classical preparations: *chooranam* (medicinal powder), *parpam* (calcined oxide), and *mezhugu* (medicinal wax) and external therapy: *vedhu* (steam application), *neer* (medicated water for wash), *poochu* (anointing), *kattu* (dressing), and *attai vidal* (leech application) (7).

This case study observed that the signs and symptoms moderately reduced within the first two weeks, the ulcer completely healed, and the discoloration also changed to normal in the 60 days of treatment. Then, it reveals that Siddha leech therapy with both internal and external medications is very effective in the management of varicose ulcers.

Methodology

Patient information

Complaints and duration

On August 5, 2022, a 48-year-old female patient attended the OPD of Santhigiri Siddha Medical College and Hospital, Trivandrum, Kerala with the following complaints: dilatation of veins, present in right lower limb for 6 years; hyperpigmented lesion with itching and swelling above the medial malleolus of the right lower limb for 6 months; and an ulcer present above the medial malleolus for the last 3 months.

History of the present and past illness of the patient

Six years ago, one fine day, the patient felt mild dilatation of veins in the right lower limb, followed by severe pain present while walking. The pain began gradually and intensified over time. She suffered from dragging-type pain that became worse when she stood for a long period and went away when she lay down. In the beginning, she consulted at St. Thomas Hospital, Chethipuzha, Changanassery, Kerala, where she was diagnosed with varicose veins and suggested following the treatment. So, she underwent allopathic treatment with internal medication and external treatment like sclerotherapy three times (6/01/18, 15/9/18, and 12/9/19) and got a mild recovery. Then, after doing heavy work, the dilatation of veins progressed well, leading to the development of an ulcer in the medial malleolus of the right lower limb with mild oozing, redness, and swelling. It started slowly and developed over time. It was modest initially and got bigger over time. Trauma has never occurred in the past. There was pain around the ulcer and discharge which was seropurulent in nature, scanty in amount, and not foul-smelling from the ulcer. There was hyperpigmentation of the skin around the ulcer. There was no associated fever or any other significant findings. As the days passed, she felt more pain, and itching and the ulcer was spreading and it was aggravated over the last 3 months. Then, she approached the Outpatient Department of Santhigiri Siddha Medical College and Hospital, Trivandrum, Kerala, at her friend's suggestion. After a proper interrogation of her and a proper evaluation of the state of the patient, she was admitted to the IPD. All the personal history and general examination of the patient were observed and noted. Local examinations of ulcers in the skin and assessment for varicose veins

were observed and noted in Table 1. Assessment criteria for varicose ulcers were evaluated by the VCS Score before treatment and noted in Table 2. After evaluating the Siddha aspects, the results were examined and recorded in Table 3.

Primary complaints

Dilatation of veins present in the right lower limbs, hyperpigmented lesion with itching and swelling above the medial malleolus of the right lower limb and an ulcer present in the right lower limb just above the medial malleolus.

Assessment of Personal History

Diet: nonvegetarian, Habit: no abusive habits, Marital status: married, Allergic History: nil, Appetite: normal, Bowel: normal (1-2 times per day), Bladder: normal (5-6 times per day), Sleep: disturbed.

Assessment of General Examination

Temperature - 98.8⁰ Fahrenheit, BP - 126/74 mm Hg, PR- 71 beats/ minute, HR- 73 beats/ minute, Respiratory Rate - 17 breaths/ minute, Height - 168 cm, Weight - 79 kg, BMI - 28 kg/m² (overweight).

Assessment of Systemic Examination

GIT: P/A, Soft, Non-tender, No organomegaly; RS: Normal Vesicular Breath Sounds heard, No added sounds; CVS: S₁, S₂ heard, No murmur; CNS: Intact, Conscious, Oriented to time, place, and person.

Assessment of Local Examination for the ulcer in the skin:

Local examination for the ulcer in the skin (inspection and palpation) and assessment for varicose veins were done and tabulated in Table 1.

Table 1: Assessment of Local Examination for the ulcer in the skin

Sl.N	Local Examination - For	Findings	
A	Inspection for ulcer		
	i.	Size and Shape	3 × 4 cm; oval-shaped
	ii.	Number	1
	iii.	Position	Just above the right
	iv.	Edge	Edematous edge
	v.	Floor	Pale
	vi.	Discharge	Serous discharge
	vii.	Surrounding Area	Blackish in colour
B	Palpation for ulcer		
	i.	Tenderness	Around the ulcer
	ii.	Floor	Reddish in colour
	iii.	Base	Adherent base
	iv.	Edge	Rolled out edge
	v.	Depth	3 mm
	vi.	Bleed	No bleeding
	vii.	Local Heat	Increased
	viii.	Loss of Sensation	No sensory
ix.	Dorsalis Pedis Artery	Palpable	

	x.	Lymph node	Not present
C	Assessment for varicose vein		
	i.	Varicose Vein	On the right leg
	ii.	Brodie Trendelenburg	Positive
	iii.	Perthes Test	Negative (suggest no

Assessment Criteria - Venous Clinical Severity Score before treatment

On admission (5/8/2022), the patient’s VCS score was assessed, and it was found to be 20, which was severe and noted and tabulated in Table 2.

Table 2: VCS Score on Admission (August 5, 2022) - Before Treatment

Clinical descriptor	Absent (0)	Mild (1)	Moderate (2)	Severe (3)
Pain	None	Occasional	Daily not limiting	Daily limiting
Varicose veins	None	Few	Calf or thigh	Calf and thigh
Venous edema	None	Foot and ankle	Below knee	Knee and above
Skin pigmentation	None	Limited peri malleolar	Diffuse Lower 1/3calf	Wider above lower 1/3calf
Inflammation	None	Limited peri malleolar	Diffuse lower 1/3calf	Wider above lower 1/3calf
Induration	None	Limited peri malleolar	Diffuse lower 1/3calf	Wider above lower 1/3calf
Number of active ulcers	None	1	2	≥3
Ulcer duration	None	<3month	3-12 month	>1year
Active ulcer size	None	<2cm	2 - 6 cm	>6cm
Compression therapy	None	Intermittent	Most days	Fully comply
Total VCS Score	0	1	16	3
	Total VCS Score on Admission - 20 (Severe)			

Assessment of Siddha aspect of Examination

Udal thathukkal (Seven physical constituents) and *Envagai thervu* (Eightfold of parameters in Siddha) were evaluated and tabulated in Table 3.

Subjective parameters

- Dilatation of veins in the right leg
- Itching and discoloration with an ulcer above the right medial malleolus

Objective parameters



- Varicose veins in the right lower limb
- Itching and hyperpigmentation with an ulcer above the right medial malleolus
- Serous discharge

- Blood investigations: Total WBC count, Differential count, RBC count, ESR, Serum IgE, PCV, Hemoglobin, MCV, MCH, MCHC, Platelet count, Random Blood Sugar, Serum Cholesterol, Blood Urea, Serum Creatinine, Serum Uric acid, Total Bilirubin, Direct Bilirubin, Indirect Bilirubin, SGOT, SGPT, ALP, Total Protein, Serum Albumin, Serum Globulin, C-Reactive Protein, Bleeding Time, Clotting Time, Prothrombin Time, HBs Ag, VDRL, HIV (NAT), and RT-PCR-COVID 19.
- Colour Doppler Study Report of the Right Lower Limb—Deep Venous System.

Table 3: Assessment of Siddha aspect of Examination

Sl. No	Siddha Evaluatory parameters	Findings	
A	<i>Udal Thaathukkal</i> (Seven Physical Constituents)		
	i.	<i>Saaram</i> (nourishing juice)	Affected (roughness of the skin)
	ii.	<i>Senneer</i> (blood)	Affected (an ulcer present in the right lower limb just above the medial malleolus)
	iii.	<i>Oon</i> (muscle)	Affected (an ulcer present in the right lower limb just above the medial malleolus)
	iv.	<i>Kozhupu</i> (fat)	Not affected
	v.	<i>Enbu</i> (bone)	Not affected
	vi.	<i>Moolai</i> (bone marrow)	Not affected
	vii.	<i>Sronitham</i> (Menstruation)	Not affected
B	<i>Envagai thervu</i> (Eightfold parameters in Siddha)		
	1 <i>Naa thervu</i> - Examination of tongue		
	i.	<i>Niram</i> (Colour)	Pinkish in colour
	ii.	<i>Thanmai</i> (Character)	Coated tongue, denuded
	iii.	<i>Pulan</i> (Sense)	Saliva tends to taste sour
	2 <i>Niram thervu</i> - Examination of colour		Wheatish
	3 <i>Mozhi thervu</i> - Examination of speech		Hoarseness of voice
	4 <i>Vizhi thervu</i> - Examination of eye		
	i.	<i>Niram</i> (Colour)	Normal
	ii.	<i>Thanmai</i> (Character)	Normal
	iii.	<i>Pulan</i> (Sense)	Normal - No visual disturbances
	5 <i>Malam thervu</i> - Examination of stool		
	i.	<i>Niram</i> (Colour)	Yellowish in colour
	ii.	<i>Nurai</i> (Froth)	Not present
	iii.	<i>Elagal/Erugal</i> (Consistency)	<i>Elagal</i> (semisolid)

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6	Moothiram thervu - Examination of urine		
	i.	<i>Neerkuri</i> - Examination of character of urine	
		a.	<i>Niram</i> (Colour) Mild yellowish in colour
		b.	<i>Nurai</i> (Froth) Not present
		c.	<i>Adarathi</i> (Specific gravity) Normal
		d.	<i>Manam</i> (Odour) Normal- No specific odour
		e.	<i>Enjal</i> (Deposits) Not present
	ii.	<i>Neikuri</i> - Examination of Urine by oil dropping	
		On admission - 5/8/2022	On discharge - 3/10/2022
	a.		
		<i>Kabha neer</i> (Instilled oil drop spread like the shape of pearl)	<i>Vatha neer</i> (Instilled oil drop spread like the shape of snake)
7	Sparisam thervu - Examination by touch		Warmth and tenderness over the right medial malleolus of the right lower limb
8	Naadi thervu - Examination of pulse		
	i.	<i>Naadi</i>	Kabha vatha naadi
	ii.	<i>Thanmai</i> (Character)	Rapid and thin
	iii.	<i>Nadai</i> (Pattern)	Normal

cause of varicose vein (*Naalavibatham*) progression to an ulcer (*punn*).

Table 4: Investigations Reports of the Patient - Before and After Treatment

Sl. No	Parameters with Units	On Admission 5/8/2022	On discharge 3/10/2022
1	Total WBC count (cells/cu mm of blood)	9600	8050
2	Neutrophils (%)	83.0	75.0
3	Eosinophils (%)	6.4	4.2
4	Basophils (%)	0	0
5	Lymphocytes (%)	7.4	14.8
6	Monocytes (%)	3.2	6.0
7	RBC count (cells/cu mm of blood)	4.5 million	4.8 million
8	ESR (mm/hr)	32	20
9	Serum IgE (IU/mL)	203	58
10	Packed Cell Volume (%)	44	40
11	Hemoglobin (g/dL)	13.0	14.9
12	Mean Corpuscular Volume (fL)	97.7	83.3
13	Mean Corpuscular Hemoglobin (pg)	28.8	31.0
14	Mean Corpuscular Hemoglobin Concentration (g/dl)	29.54	37.2
15	Platelet count (cells/mcL)	2.8 lakhs	2.7 lakhs
16	Random Blood Sugar (mg/dL)	96	92
17	Serum Cholesterol (mg/dL)	193	160
18	Blood Urea (mg/dL)	21	20
19	Serum Creatinine (mg/dL)	0.9	0.7
20	Serum Uric acid (mg/dL)	4.2	3.0
21	Total Bilirubin (mg/dL)	1.0	0.8
22	Direct Bilirubin (mg/dL)	0.1	0.2
23	Indirect Bilirubin (mg/dL)	0.9	0.6
24	SGOT (U/L)	30	26
25	SGPT (U/L)	45	41
26	ALP (U/L)	103	68
27	Total Protein (g/dL)	6.4	6.9
28	Serum Albumin (g/dL)	3.3	3.6
29	Serum Globulin (g/dL)	3.1	3.3
30	C-Reactive Protein (mg/dL)	1	0.2
31	Bleeding Time (min)	3	3
32	Clotting Time (min)	5	4
33	Prothrombin Time (sec)	10	10
34	HBs Ag (mIU/mL)	Negative	Not elicited
35	VDRL	Negative	Not elicited
36	HIV (NAT)	Negative	Not elicited
37	RT-PCR - COVID 19	Negative	Negative

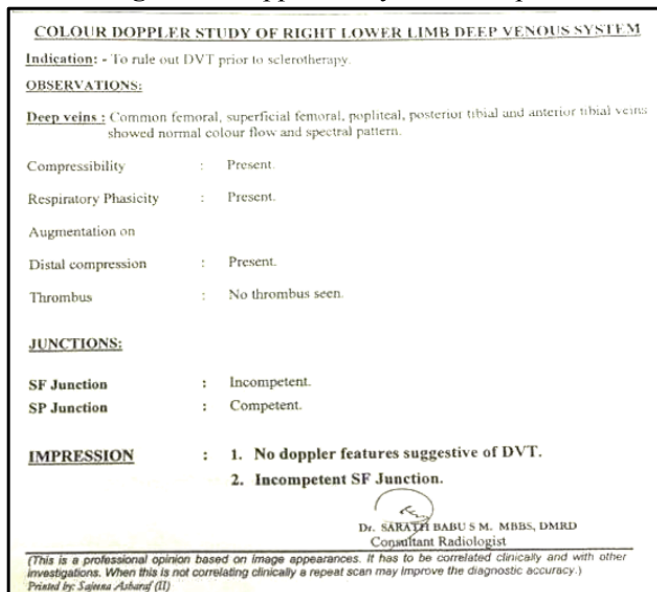
Investigation reports of the Patient: Before treatment and After treatment

It was recommended to the patient to conduct investigations related to the diagnostic approach for varicose ulcers, as well as investigations related to precautionary assessment for *Attai Vidal* to prevent blood-borne infection during the procedure and to evaluate the patient's coagulability state to prevent excessive bleeding during or after the procedure. All the investigation reports done on May 8, 2022 (on admission) and on October 3, 2022 (on discharge) were documented and tabulated in Table 4.

Colour Doppler Study Report of the Right Lower Limb—Deep Venous System

The Colour Doppler study report of the right lower limb-deep venous system done on September 17, 2018, revealed that there was no presence of DVT, but there was incompetence at valves of the saphenofemoral junction presented in Figure 1, which was the main

Figure 1: Doppler study -RLL -Report



Line of treatment with its benefits in this case of Naalavibathapunn

Purgation was given first to reduce deranged *vatham* to get normalized. Internal medicines were given for wound healing by stopping the spread of the ulcer, avoiding the super-added infections, and normalizing the deranged seven physical constituents (nourishing juice, blood and muscle).

External medicines were given for the symptomatic relief of pain and itching and to promote wound healing. One of the external therapies, *Attai vidal* (leech therapy), was given to the patient to improve blood circulation, which helps markedly in wound healing to attain the normal colour of the skin.

The treatment given to the patient over 60 days at the IPD of Santhigiri Siddha Medical College and Hospital was documented and tabulated in Table 5. The table revealed the time, duration of the treatment, internal treatment with its adjuvant, and dosage. The pharmacological action of the given external and internal medicines was noted in the reference articles from standard journal publications and Siddha classical literature.

Treatments followed

The medicines were selected based on the three humoral variations to normalize the deranged as per Siddha’s classical literature references. Following Siddha formulations were prescribed and the external therapies were done as per in Table 5. Some of the internal medicines and external medicines were advised to follow particular periods as per the Siddha texts.

SOP followed for the Attai vidal (Leech therapy)

All the standard operating procedures followed during the *Attai vidal* (leech application) therapy were documented in Figure 2.

Requirements for Leech Therapy

Dressing code: Apron, mask, sterile gloves, and head cap

Checklist: Consent form, artery forceps, case sheet, straight forceps, leeches, scissors, water, cotton, leech container, gauze roll, leech storage stand, thermometer, water storage container, surgical spirit, bureau, normal saline, table with lock, *padikaara neer*, examination table, square tray, *Aloe vera* pulp, kidney tray, turmeric powder, torchlight, BP apparatus, weighing machine, stethoscope, bed sheet, rubber sheet, pillow, chair and stool (small and large).

Leech therapy procedure: Reference

The *Agasthiyar Nayanavidhi*, a Siddha classical book, provides a detailed description of the leech therapy technique. It covers leech collection, storage, patient preparation, leech purification, the primary procedure, and the post-treatment procedure.

Storage and Maintenance of Leeches

The leeches were kept in an appropriately labeled container with numerous openings on top for proper air circulation. The water in the container was pure, de-chlorinated, and replenished once every three days. The temperature was kept between 5 and 27°C. More ventilation and darkness had been maintained in the area.

Preparation and selection of the Leeches

Over 10 species, two types of them such as *Hirudo medicinalis* and *Hirudo verbena* were used in this treatment. Carbon black, soft and shiny with black lines in moderate size, active leeches were selected.

Purification of leeches

After soaking in turmeric water for five to ten minutes, the chosen leeches were placed in regular water.

Preparation of site used for leech application

After being thoroughly washed with clean water, the leech-biting locations were left to dry.

Preparation of the patient

On the day before leech therapy, the patients were instructed to take *Nilavagai chooranam* (5g) at bedtime with hot water for moderate purgation. It was also suggested to the patient to have light meals prior to the leech application.

Procedure: Attai vidal

The leeches were allowed to bite at the affected site. The anterior tapering part (head) of each leech was made to attach to the area around the ulcer, which was presented just above the right medial malleolus of the right leg. Within a few seconds, the leeches got attached to the sites around the ulcer; some of them didn’t get attached, so a single drop of blood was made to ooze out by using a pricking needle without damaging the ulcer site. After that, the unbitten leeches have bitten at the sites, and all the leeches were left undisturbed. A small piece of gauze dipped in water should be placed over each leech. The leeches slowly started to suck the

blood. The leeches were frequently examined (every 10 minutes or so) to make sure that they were still in place. All the leeches dropped themselves off in 20–40 minutes after sucking the blood. The leeches, which had not fallen for more than one hour, were dusted with turmeric powder at the site of their bite. Then the leeches fell automatically. The time of biting and dropped time of every leech were noted and documented.

Post-treatment procedure in Leeches

The anterior part of the leeches was allowed to dip into turmeric powder kept in a square tray. Immediately, within seconds, they had vomited the blood. The leeches, which did not vomit the blood completely, were squeezed very mildly and vomited the maximum amount of blood they sucked. The leeches were used again for the same patient after ten days.

Figure 2. SOP followed in the Attai vidal (Leech Therapy)

Storage of leeches Preparation and purification of the leeches



Preparation of the site for the leech application

Attai vidal – Leeching



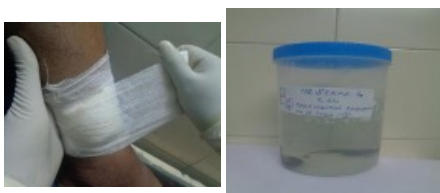
Post-treatment procedure in Leeches

Aloe vera pulp with turmeric powder for bandaging the bitten sites and the ulcer



Post-treatment procedure in the Patient

Storage of used leeches in leech application after therapy



Post-treatment procedure in the Patient

Moistened gauze was put over the bitten site to absorb the pouring of blood. The sites were wiped every 15 minutes to see if any fresh blood was still oozing. After the therapy, the sites were cleaned with *padikaraneer*. Turmeric powder spread over the aloe vera gel was used for dressing the wound. After treatment, again, all the vital signs were noted. The patient was advised to restrict her movements and to stay calm in one place for a few hours.

Outcome and follow-up of both internal and external medicines

During the treatment, the patient did not experience any complications, and no Adverse Drug Reaction was reported. In every IPD round, all the vital signs and symptoms of *naalavibatha punn* (varicose ulcer) were noted and documented. The pain, itching, and swelling were reduced moderately during the treatment. After 60 days, the ulcer disappeared without any signs of its presence. Hyperpigmented skin lesions were moderately changed by the normal coloration of the skin by new tissue formation. The VCS Score was reduced to 4, which was mild. On discharge, the patient was advised to take internal medicines other than *rasa gandhi mezhugu* for the next 3 months. In the next 8 months of follow-up, after the 60 days of treatment, the patient had no clinical features of varicose ulcer (*naalavibatha punn*).

Pathiyam (Instructions and advice on dietary habits do's and don'ts during the treatment period) (7)

The patient was advised to follow a diet consisting of pulses: *naripayaru* (*Vigna trilobata* (L.) Verdc.) and *thuvaram paruppu* (*Cajanus cajan* (L.) Huth); dairy products: cow's buttermilk; tender vegetables: *vaazhaithandu* (*Musa paradisiaca* L.), *avarai* (*Lablab purpureus* (L.) Sweet), *mullangi* (*Raphanus raphanistrum* subsp. *sativus* (L.) Domin), *aththi* (*Ficus racemosa* L.), and *vellari* (*Cucumis sativus* L.), greens: *parattai keerai* (*Evolvulus emarginatus* Burm.f.), *murungai* (*Moringa oleifera* Lam.), *mullangi keerai* (*Raphanus raphanistrum* subsp. *sativus* (L.) Domin), *pannai keerai* (*Celosia argentea* L.), and *mudakaruthan keerai* (*Cardiospermum helicacabum* L.). The patient was also advised to avoid the following things: subjecting legs to excessive heat, tobacco, and alcoholic beverages; sitting or standing for long periods; and frequent intake of sour and hot tastes.

Advice on completion of treatment

- Always maintain a healthy body weight.
- A low-salt and high-fiber diet is preferable.
- Avoid footwear with high heels.
- Avoid long standing and crossing legs.
- While sleeping or taking rest, the legs should be elevated.
- Do regular swimming, cycling, walking, and physiotherapy exercises like knee bends with ankle flexion and leg lifts.
- Compression stockings should be used.

Table 5: Treatments given from August 5, 2022 to October 3, 2022 (60 days)

Day	Type	Sl. No	Name of the medicines	Quantity/ Dosage	Date and Timing		Target / Mode of action	
1st	External medicine	1	<i>Notchi</i> leaves <i>Vedhu</i> (<i>Vedhu</i> - Steam application)	100 g	5/8/2022	9.00 - 9.30 am	Anti-ulcerogenic (8)	
		2	<i>Padikara neer</i> * washing (<i>Neer</i> - medicated water for wash)	50 ml	5/8/2022	10.30 - 10.40 am	Wound healing (9) Anti-hemorrhagic (10), Anti-microbial (11)	
		3	<i>Mathan thailam</i> * dressing (<i>Thailam</i> - Medicated oil)	30ml	5/8/2022	10.40 - 11.00 am	Wound healing (12,13)	
2nd	Internal medicine	4	<i>Agasthyar kuzhambu</i> with <i>notchi</i> leaf juice (for purgation). (<i>Kuzhambu</i> - medicated semisolid mixture)	100 mg	6/8/2022	6 am	Majority of the ingredients have Antiseptic and Anti-inflammatory properties (14)	
3rd	No internal and external medicines for 3 rd day advised taking complete rest							
4th	Internal medicine	5	<i>Rasa gandhi mezhugu</i> ** (<i>Mezhugu</i> - Medicinal wax)	500 mg	8/8/2022 - 24/09/2022	8 am, 7.30 pm	Immuno-modulatory, Anti-inflammatory, Anti-cancer (15,16)	
		6	1	<i>Parangipattai Chooranam</i> (<i>Chooranam</i> - medicinal powder)	1g	8/8/2022 - 3/10/2022	8.10 am, 7.40 pm	Anti-fungal (17), Anti-vitiligo (18)
			2	<i>Sangu Prapam</i> (<i>Parpam</i> - calcined oxide)	200 mg			Anti-ulcer (19)
			3	<i>Silasathu Parpam</i>	200 mg			Anti-inflammatory, Antinociceptive (20)
6th	External medicine	7	<i>Attai vidal</i> (21, 22) (<i>Attai vidal</i> -Leech application)	5 leeches	10/08/2022	8.30- 9.30 am	Anti-ulcerogenic with wound healing(23,24), Anti-coagulant(25), Analgesic & Anti-inflammatory(26), Anti-microbial(27)	
16th				5 leeches	20/08/2022			
26th				5 leeches	30/08/2022			

Padiakra neer* washing and *Mathan thailam* dressing and bandage were done again for 30 days from 8/8/2022 - 6/09/2022 at 10.30 - 11.00 am. *Rasa gandhi mezhugu* - 5 days drug with 2 days as drug holidays for 1 *mandalam* (48 days) from 8/8/2022 to 24/09/2022.

Assessment Criteria: Venous Clinical Severity Score, after Treatment

On October 3, 2022, after 60 days of internal and external medication, the evaluation of Venous Clinical Severity Score was assessed again at the time of discharge and it was found to be 4 which was mild and noted and tabulated in Table 5.

Table 6: VCS Score on discharge (October 3, 2022) - After treatment

Clinical descriptor	Absent (0)	Mild (1)	Moderate (2)	Severe (3)
Pain	None	Occasional	Daily not limiting	Daily limiting
Varicose veins	None	Few	Calf or thigh	Calf and thigh
Venous edema	None	Foot and ankle	Below knee	Knee and above
Skin pigmentation	None	Limited peri malleolar	Diffuse Lower 1/3calf	Wider above lower 1/3calf
Inflammation	None	Limited peri malleolar	Diffuse lower 1/3calf	Wider above lower 1/3calf
Induration	None	Limited peri malleolar	Diffuse lower 1/3calf	Wider above lower 1/3calf
Number of active ulcers	None	1	2	≥3
Ulcer duration	None	<3month	3-12 month	>1year
Active ulcer size	None	<2cm	2 - 6 cm	>6cm
Compression therapy	None	Intermittent	Most days	Fully comply
Total VCS Score	0	2	2	0
Total VCS Score on discharge - 4 (Mild)				

Discussion

As per a recent publication in WHO’s International Standard Terminologies on Siddha Medicine, *Naala noi* or *Naalaka noi* is the term used for

disease of the veins (Term ID: ISMT.4.16.76). Due to the derangement of the *vatham*, there is obstruction of normal blood flow; stagnant blood results in the release of pro-inflammatory mediators; and white blood cell infiltration in the affected area leads to itching and

hyperpigmentation of the skin. According to T.V.Sambasivam Pillai Dictionary, ulcer (*punn*) is classified into the following 22 types; *neruppu punn* (burns), *mega punn* (venereal ulcer), *koruku punn* (chancro), *veditha punn* (fissuring ulcer), *azhar punn* (inflamed ulcer), *vellai punn* (gonorrhoeal ulcer), *aaraa punn* (chronic ulcer), *oduvu punn*, *kiranthi punn* (syphilitic secondary rashes), *ottu punn* (contagious sore), *kuzhi punn* (deep sore or perforating ulcer), *rasa punn* (diabetic carbuncle), *karappan punn* (eczematous ulcer), *parangi punn* (syphilitic primary sore), *vettu punn* (incised wound), *kaya punn* (traumatic sore), *azhi punn* (sloughing sore), *rasa vekkadu punn* (ulcer caused by mercurial poisoning), *puttru punn* (fungal ulcer), *vayitru punn* (gastric ulcer), *thulai punn/purai punn* (sinus) and *ari punn* (rodent ulcer) (28). Another classification of 10 types of ulcers (*punn*) as follows: *saruma punn* (dermatitis), *athirvu punn* (dermatitis traumatica), *thee punn* (dermatitis calorica), *kulirchi punn* (chill blains or frostbite), *azhugu punn* (dermatitis gangrenosa), *nanju punn* (dermatitis medicamentosa), *veppu noi punn* (exanthema), *thinavu punn* (pruritis and urticaria), *kirandhi* (venereal ulcer), and *korukku punn* (chancroid).

Varicose ulcers are common in middle-aged men who are doing long-standing work like watchmen, policemen, salespeople, etc. Chronic varicose veins always result in ulcer formation if left untreated. Treatment mode for the Naalavibatha punn (varicose ulcer) often varies depending on the severity of the ulcer. If the severity of the ulcer is high, it must be treated with surgical intervention (29). If a severe infection is present in the wound, modern medicine treats it with antibiotics and anti-fungal agents. Antibiotic use can cause many health issues in the gut, resulting in gut-related issues.

Surgery is the most common intervention in treating varicose veins in modern medicine. After surgery itself, smaller-to-major life-threatening bleeding can occur, and recurrent ulcer formation is also one of the worst complications of post-varicosectomy. In these types of cases, the patients had complaints of recurrent infection on the surgical sites and varicosity formation on recurrence in a short duration (30).

The patient, in this case report, complained of six years of dilated veins in the lower limbs of her right leg, swelling and itching above the right leg's medial malleolus for six months, and three months of a small ulcer in the same location. On examination, the Venous Clinical Severity Score was found to be severe (VCS Score-20). The patient's sleep was disturbed. According to all the above details, the condition was diagnosed as *Naalavibatha punn* (varicose ulcer).

The mode of action and selection of every Siddha drug is based on correcting or normalizing the deranged *uyir thathu* (*vatham*, *azhal*, and *iyyam*) of that particular ailment. *Vatham* is the primary *thathu* that has been affected in *Naalavibatha Punna*; the aggravated *vatham* was brought back to normal by the purgation therapy of *Agasthiyar Kuzhambu* with *notchi* leaf juice (*Vitex nigundo* L.) on the second day, and steam therapy was done with leaves of *notchi* for half an hour on

admission day. The steam therapy relieved the excessive fluid accumulation around the ankles.

Agasthiyar kuzhambu (herbomineral Siddha formulation containing ingredients such as purified Mercury Quicksilver, Purified Sodium Chloride Impura, Sodium Biborate, Red Orpiment, and Trisulphite of Arsenic, and some herbal drugs) is one of the well-known Siddha classical preparations that has been used for varieties of diseases like *suram* (hyperpyrexia), *araiyaapu* (bubo), *kabhala vali* (cephalgia), *gunmam* (gastralgia), *kalladippu* (renal calculi), 13 types of *sanni* (delirium), *maladu* (infertility), etc., with various adjuvants. The ingredients of this purgative drug possess antioxidant, anti-microbial, antiviral, antifungal, anticarcinogenic, anticancer, anticytotoxic, anthelmintic, antagonistic, antidiabetic, antispasmodic, antihypertensive, antispasmodic, antipyretic, antiinflammatory, anti-retroviral, analgesic, antinociceptive, hypolipidemic, relaxant, neuroprotective, bronchodilator, diuretic, immunomodulator, gastroprotective, hepatoprotective, nephroprotective, and anti-asthmatic properties (31). It is predominantly used with *notchi* leaf juice to normalize the deranged *vatham* (rheumatism, chronic pain) and to regularize digestion, which is helpful in the good absorption of the drug from the gut and is used in the management of the *Naalavibatha punn*. The second day of purgation therapy itself relieved the pain moderately. The third day of complete rest was advised to the patient to prepare the body and gut to receive the upcoming internal medicines effectively.

The ulcer was cleaned daily by the *Padikara Neer*, and dressing and bandaging were done by *mathan thailam*. *Padikara neer* is one of the external medicines that contain water and alum. It is commonly used for gargling, washing the wound, as eye drops for eye diseases, and to stop bleeding from the nose as nasal drops. It cures aphthous ulcers and other ulcers. Alum has the properties of wound healing, being anti-hemorrhagic and anti-microbial, which arrest the bleeding from the wound, support the removal of necrosed tissues by the formation of new tissues, and prevent the spread of ulcers by suppressing or avoiding the growth of the microorganisms (32). *Mathan Thailam* (*Patchai Ennai*), which is one of the best wound healing medicated external oils, widely used by Ayush doctors, has anti-ulcerogenic properties with the ingredients *Thurusu* (purified copper sulfate), coconut oil (*Coccus nucifera*. L.) and leaf juice of *Oomathai* (*Datura metel var. fastuosa*. L.). *Thurusu* and *Oomathai* have analgesic, anti-microbial, anti-fungal, and wound-healing properties that remove the debridements of the ulcer and support healthy cell proliferation around the ulcer (33). Coconut oil also supports the wound-healing process because of its bioactive components (34).

The internal medication *Rasa gandhi mezhugu* is mentioned in the *Siddha Vaidhiya Thirattu* to treat a variety of diseases, including cervical adenitis, scabies, alopecia, cancer of the penis, vaginal cancer, oral cancer, carbuncle, piles, fistula-in-ano, leprosy, abscesses, cysts, neuralgia, etc.(35). It acts as an immunomodulator, which helps in the nourishment of

the tissues for cellular growth and removes the necrosed tissues.

By decreasing the inflammatory mediators, the adverse changes surrounding the ulcer were avoided. The combination of *Parangipattai Chooranam*, *Sangu Parpam*, and *Silasathu Parpam*—all three drugs have wound healing and bacteriostatic properties, so it is helpful in the healing of the ulcer by suppressing further infections of the ulcer and promoting the formation of healthy tissues.

Indications for leech therapy in the Siddha system of medicine are traumatic edema, tumorous growth, abscess, uncontrolled vomiting, headache, abdominal and chest diseases, hepatomegaly, whooping cough, eye diseases, and joint swelling (21). The saliva of the leech contains numerous amounts of enzymes that promote the growth of healthy tissues, and the enzymes get mixed with the patient’s blood, which helps in the prevention of clot formation, which is the main complication of DVT in the long-term varicose vein.

After 60 days of follow-up, the patient insisted on consulting an angiologist at St. Thomas Hospital, Chethipuzha, Changanassery, Kerala, and the Doppler study for the right lower limb venous structure was taken to look for any DVT formation, and it revealed that there was no evidence of DVT and no abnormal venous valves were found. So the physician advised her to take the Siddha interventions, and there was no need for surgery. The patient was under follow-up for the next 8 months and was advised to take *Parangipattai Chooranam*, *Palagarai Parpam*, and *Silasathu Parpam* for the next 3 months after 60 days of treatment.

In the present case, *Naalavibatha punn*, the aggrieved primary dhosam is *vatham* (air + space), and the second is *pitham* (fire) and *kabham* (earth + water). These lines of intervention were followed to normalize the deranged *uyirthatthukal* (three humours of the body). After treatment, the VCS Score was reduced to 4 (mild), and the other symptoms like pain, itching, and swelling have reduced significantly. Dilated veins in the affected area shrank well. The hyperpigmented skin lesions were diminished markedly. Overall, the subject showed a significant improvement in subjective and objective parameters. During this case study, no adverse effect was noted. The internal medicines such as *Rasa Gandhi Mezhu*, *Parangipattai Chooranam*, *Silasathu Parapam* and the external therapies *padikaneer* washing, *mathan thylam* topical application, and *attai vidal* showed a significant improvement in all the associated symptoms in the treatment of *Naalavibatha punn*. The state of the ulcer in the patient and its improvement were noted and documented in Figure 3.

Conclusion

Based on the clinical report, we may conclude that *Attai vidal* (leech application) can give a ray of hope in the treatment of *Naalavibatha punn* (Varicose ulcer) with internal and some other external therapies like wound cleaning with medicated *Padikara neer* and external oil application like *Mathan thailam*. None of

the complications, like severe bleeding, wound infection, or hypersensitivity, were observed during the therapy. Leech therapy proves to be an effective, time-saving, affordable, and acceptable treatment. Though treating varicose ulcers is a difficult task, we have managed to treat them with “Leech Therapy” along with Siddha medicines. Additionally, further evaluation should be conducted with a large sample size to exhibit the efficacy of Siddha treatment for the *Naalavipatha punn* (Varicose ulcer).

Figure 3: State of *Naalavibatha punn* (Varicose ulcer) from Admission (5/8/2022) to Discharge (3/10/2022)



Perspective from the Patient

The patient: I had a dilated vein in my right leg for 6 years. Itching and skin color changes were present for the last 6 months. Before 3 months, a small ulcer developed in my right leg, just above the ankle, with mild discharge. Then I came to the OPD of Santhigiri Siddha Medical College and Hospital, and the doctor advised me to take Siddha medicine internally for 2 months. He also advised me to do *Attai vidal* for 3–4 sittings with the internal medicines. After 2 sessions of the *Attai vidal* treatment, the symptoms have slightly reduced, and I feel better. Then I continued my internal medication until I got better relief.

Declaration of Patient's Informed consent

The patient gave written consent for this study to be published. She has agreed on the form in which her pictures and other clinical data may be published. She was aware that, while every attempt would be made to keep her identity hidden and her name and initials would not be disclosed, anonymity could not be ensured.

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