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Case Report

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AYURVEDIC MANAGEMENT OF CHRONIC UNILATERAL LOWER LIMB LYMPHEDEMA: A CASE REPORT

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ABSTRACT

Chronic secondary lymphedema is a progressive and often debilitating condition that may follow surgical disruption of lymphatic channels. Ayurvedic medicine offers both internal and external interventions to address chronic swelling through mechanisms such as shothahara, srotoshodhana, and rasayana therapy. A 37-year-old male presented with persistent, non pitting swelling of the left lower limb for 7-years following fasciotomy for necrotizing fascitis was managed through an integrative Ayurvedic protocol. The treatment involved internal medications including Punarnavadi Guggulu, Gokshuradi guggulu, Kamadugha Rasa, and Nityananda Rasa, along with daily application of Agnilepa to affected limb. After 15 days, a significant reduction of up to 8 cm in limb circumference was observed at the shin, with improvements in ambulation and limb comfort. This case suggests that Ayurvedic therapies, when used integratively, can offer substantial symptomatic and objective benefits in chronic, structurally compromised cases of lymphedema.

KEYWORDS: Lymphedema, Ayurveda, Punarnavadi Guggulu, Agnilepa, Fasciotomy, Integrative Medicine.

INTRODUCTION

The lymphatic system plays two important functions in the human body. It maintains the fluid balance of the body by returning the protein deposits and extra tissue fluid extravasated from the blood capillaries to the circulation system. The lymphatic vessels carry germs and pathogens to the lymph nodes so that the immunological defense mechanism is activated. Lymphedema is a chronic condition characterized by the accumulation of interstitial fluid due to impaired lymphatic drainage. It often results in progressive swelling, fibrosis, and functional impairment.[1] Secondary lymphedema may develop following surgery, radiation, or infection.[2] One such debilitating etiology is Necrotizing fascitis, a rapidly progressing soft tissue infection that often necessiates aggressive surgical management such as fasciotomy and debridement. While these interventions are life saving, they frequently result in long term complications. Including chronic limb lymphedema and localized functional impairement.[2]

The clinical complexity increases when lymphedema develops in paients with a history of chronic liver disease and portal hypertension. In such cases Systemic fluid dysregulation, hypoalbuminemia, and compromised lymphatic clearence can contribute to persistent edema. Even after resolution of hepatic dysfunction and normalization of liver function tests, residual lymphatic insufficiency may continue to present significant management challenges.[2]

In Ayurvedic literature, similar presentations are described under Shotha or Shopha.[3,4], Localized swelling is broadly classified as ekanga shotha and systemic hepatic disorders are encompassed under yakrit vikara.[3,4] According to classical ayurvedic texts, chronic swelling arises from vitiation of kapha and vata doshas, along with obstruction of rasa and raktavaha srotas. Leading to stagnation and fluid retention. When such conditions follow resolved liver pathology, they are

considered uttara vyadhi(sequelae) requiring treatment that adresses both residual srotorodha and dhatukshaya.

Management includes both bahya chikitsa (external therapies like lepa) and abhyantara chikitsa (internal medications), targeting shothahara, srotoshodhana, and rasayana actions.[3,4,9] External applications such as agnilepa aim to stimulate local circulation, concurrently internal medications including guggulu based formulations[5] and herbomineral preparations[7] are employed to support lymphatic detoxification, reduce inflammation, and restore tissue balance.

This case report presents the integrative ayurvedic management of chronic unilateral lower limb lymphedema in a patient with a prior history of necrotizing fascitis and resolved hepatic dysfunction. The case illustrates the potential of classical ayurvedic interventions in addressing persistent post infective lymphedema, especially in individuals with complex systemic histories.[8]

CASE REPORT

Chief complaint

A male patient of age 37years approached to shalya tantra OPD, Taranath Government Ayurvedic Medical Collage and Hospital Ballari on 10th March 2025. presented with chronic swelling and disfigurement of left lower limb for 7 years.

Associated complaint

Heaviness, tightness, and restricted mobility.

History of Present Illness

The patient is a 37-year-old male who was apparently healthy 7yrs back. N/K/C/O DM, HTN. presented with a 7-year history of persistent swelling in the left lower limb, which began following an episode of necrotizing fasciitis in the same limb. The infection had necessitated emergency fasciotomy, repeated surgical debridement, and split-thickness skin grafting. Post-surgical healing was prolonged, and the patient developed residual non-pitting edema, which gradually became chronic and functionally limiting. Over the years, the patient experienced recurrent episodes of cellulitis (notably one episode 5 years ago), each managed with antibiotics. Despite the resolution of acute infections, the swelling persisted and slowly worsened in size and firmness. four years ago, during evaluation for progressive fatigue and abdominal distension, the patient was diagnosed with chronic liver disease (CLD), likely secondary to non-alcoholic fatty liver disease (NAFLD). He was found to have portal hypertension, grade I esophageal varices, mild ascites, pancytopenia, and hypoalbuminemia. Since then, he has been under periodic hepatology follow-up and on conservative management, Over the past year, the swelling in the left leg has become more disfiguring, with increased tightness around the ankle and midfoot, limiting the patient's ability to wear shoes or walk long distances. He reported no recent episodes of fever, erythema, or ulceration, and no signs of active infection.

Clinical Examination

General Examination
Patient appeared moderately built
Pallor present; no icterus, cyanosis, or clubbing

Vitals
BP 100/60 mmHg,
Pulse 84 bpm,
Temp - afebrile
Systemic Examination
CNS: Concious and well oriented.
CVS: S1, S2 heard
RS: Bilateral NVBS present
P/A: Soft non tender

Local Limb Examination (Left Lower Limb)

Inspection

Diffuse enlargement of the limb, extending from mid-thigh to foot.
SSG patch visible over medial thigh and leg, with post-inflammatory hyperpigmentation.
Skin appeared thickened and rugose over scar areas.
No signs of active inflammation, ulceration, or discharge.

Palpation

Non-pitting edema throughout the limb
Local warmth absent
No tenderness
Skin indurated, with reduced elasticity
No varicosities or lymphadenopathy

Circumference Measurements

Above knee: 45 cm
Below knee: 39 cm
Just above scar: 45 cm
Below scar: 44 cm
Ankle: 47 cm
Midfoot: 33 cm

Range of Motion (ROM)
Reduced dorsiflexion and plantarflexion due to tightness and swelling at ankle.
Knee and hip ROM intact but uncomfortable during extended activity.

Neurological Examination
Sensory and motor functions preserved
No foot drop or neuropathic symptoms

Investigations
CBC
Hemoglobin - 10.6 g/dL,
WBC- 2,100/mm³,
Platelets- 77,000/mm³

LFT
Total bilirubin - 1.0 mg/dL,

Direct - 0.2 mg/dl
SGOT- 47.6 IU/L
SGPT- 36.1IU/L
ALP- 65.9 IU/L
Total protien - 6.5 mg/dl
Serum albumin -3.0 mg/dL
Globulin- 3.5 mg/dl
Doppler Study (Lower Limb): Normal arterial and venous flow; no deep vein thrombosis or obstruction
Ayurvedic Diagnosis; Ekanga shotha

Treatment

Internal Therapy

The treatment was designed based on the Ayurvedic diagnosis of Ekanga Shotha (chronic unilateral swelling) in the background of resolved Yakrit Vikara (liver dysfunction). The therapeutic goals were Shothahara (anti-inflammatory), Srotoshodhana (channel cleansing), Mutrala (diuretic), and Rasayana (rejuvenative).

A 15-day course of oral Ayurvedic formulations was administered as follows.

1. Kamadugha Rasa 2 tabs BD — Before food(with guduchi swarasa)
2. Nityananda Rasa. 1 tab BD — After food
3. Gokshuradi Guggulu 1 tab BD — After food
4. Punarnavadi Guggulu 1 tab BD — After food
5. Dhatri Loha 1 tab BD — Before food

These medicines were selected for their actions on Kapha-Vata vitiation, lymphatic congestion, and hematologic correction. No adverse reactions were noted during the treatment period.

External Therapy

An external application of Agni Lepa (a classical herbal paste) was used daily over the affected limb, for 15 days. It was retained for 60–90 minutes and removed with warm water.

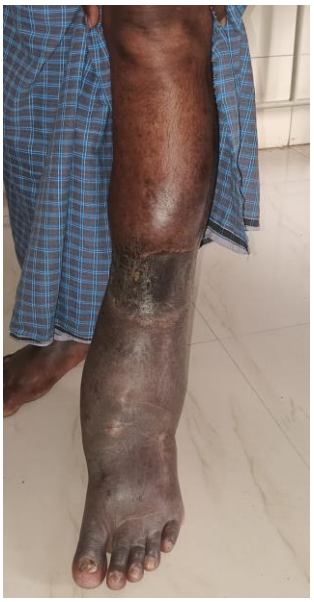
Composition of Agni Lepa

Sanskrit Name	Botanical Name	Therapeutic Actions
Lashuna	Allium sativum	Srotoshodhana, Shothahara, Vedanahara
Lavanga	Syzygium aromaticum	Raktashodhaka, Krimighna, Deepana
Maricha	Piper nigrum	Amapachana, Srotoshodhana, Vedanahara
Sarshapa	Brassica campestris	Lekhana, Svedopaga, Kapha-Vatahara
Haridra	Curcuma longa	Shothahara, Vranahara, Krimighna
Agnimantha	Clerodendrum phlomidis	Shothahara, Vatahara, Srotoshodhana
Nirgundi	Vitex negundo	Vedanahara, Shothahara, Kapha-Vatahara
Tulasi	Ocimum sanctum	Krimighna, Lekhana, Svedopaga
Eranda	Ricinus communis	Shothahara, Vatahara, Srotoshodhana

The combination was selected to promote circulation, reduce fibrotic tissue stagnation, and relieve pain and heaviness.

Before treatment

Agnilepa



After treatment

Outcome and Findings

Objective Findings: Limb Circumference (in cm)

REGION	Before treatment	After treatment	Reduction
Above Knee	45cm	41cm	4cm
Below Knee	39cm	38cm	1cm
Above Scar	45cm	41cm	4cm
Below Scar	44cm	36cm	8cm
Ankle	47cm	43cm	4cm
Midfoot	30cm	28cm	2cm

Subjective Improvements

Noticeable reduction in limb heaviness and tightness

Improved walking comfort and functional mobility.

No recurrence of cellulitis during the treatment period

Positive impact on patient's self-confidence and social engagement

DISCUSSION

This case illustrates the successful Ayurvedic management of chronic post-necrotizing fasciitis lymphedema in a patient with a history of liver dysfunction, where liver function had normalized, but localized lymphatic obstruction and tissue fibrosis persisted. Despite normalization of systemic parameters, residual soft tissue swelling and disfigurement remained unresolved with conventional approaches.

From an Ayurvedic perspective, Ekanga Shotha (localized swelling) arises due to Kapha and Vata dosha vitiation in the peripheral tissues, leading to Srotorodha (obstruction of bodily channels) and Meda Dushti (connective tissue imbalance).

The internal medications were chosen are Shothahara (anti-inflammatory), Mutrala (diuretic), and Raktaprasadana (blood-purifying) effects. Punarnavadi Guggulu and Gokshuradi Guggulu are classic formulations for edema and lymphatic congestion. These act by improving microcirculation and promoting renal clearance of accumulated fluid. Kamadugha Rasa supports Rasa and Rakta Dhatu balance and is indicated in inflammatory conditions with a Pitta component. Nityananda Rasa has traditional use in Granthi, Shotha, and lipoma-like masses, often related to lymphatic stagnation. Dhatri Loha was included for its Rasayana, Pandu-nashaka, and anti-anemic properties, particularly beneficial given the patient's prior pancytopenia and hypoalbuminemia.

The use of Agni Lepa provided topical stimulation to the lymphatic flow, reduced tissue rigidity, and improved local metabolic activity. Herbs like Lashuna, Haridra, and Agnimantha are documented to exert anti-fibrotic, antimicrobial, and anti-inflammatory effects, which likely facilitated interstitial remodeling. The notable reduction in limb circumference (up to 8 cm in some regions) over a brief period indicates rapid response, while subjective improvements in mobility and social confidence reflect the functional value of the therapy.

This case supports the Ayurvedic principle of treating both the root (Mula) and the manifestation (Vyadhi)—even when systemic pathology is clinically resolved, residual Dhatu-level imbalances can persist and respond to targeted Ayurvedic therapies.

CONCLUSION

This case demonstrates the potential effectiveness of Ayurvedic management in addressing chronic post-infective lymphedema, even when underlying systemic conditions such as chronic liver disease and portal hypertension have resolved. The integrative use of external Agni Lepa and internal polyherbal-mineral formulations resulted in significant reductions in limb circumference, improved functional mobility, and enhanced quality of life in a patient with longstanding disfigurement and physical limitation.

The individualized approach based on Ayurvedic principles such as Shothahara, Srotoshodhana, and Rasayana proved beneficial in managing localized fluid retention and lymphatic dysfunction. Given the absence of adverse effects and rapid clinical improvement, this case highlights Ayurveda's relevance as a supportive and standalone modality in the management of chronic soft tissue and lymphatic disorders.

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