

Role of Siravedhana (Bloodletting) in the Management of Vatarakta (Gout): A Case Report

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ABSTRACT

Background

Vatarakta, a classical Ayurvedic condition arising from mutual obstruction of Vata Dosha and Rakta Dhatu, shares clinical parallels with gout — an inflammatory arthropathy driven by monosodium urate crystal deposition. While Raktamokshana (therapeutic bloodletting) is a cornerstone treatment in Ayurvedic surgery, objective documentation of its outcomes in such conditions remains sparse.

Case Presentation

A 27-year-old male presented with acute pain, swelling, and restricted mobility of the right first metatarsophalangeal (MTP) joint for one week. Laboratory findings revealed elevated serum uric acid (>7 mg/dL), mildly raised ESR, and a mildly elevated RA factor. The clinical presentation was consistent with acute podagra, clinically suspected as Uttana Vatarakta.

Management and Outcome

Siravedhana (therapeutic venesection) was performed in two sittings (Day 0 and Day 7) at the dorsal venous arch of the right foot, proximal to Kshipra Marma (the vital point located in the web space between the first and second metatarsals). Approximately 60–70 mL of blood was withdrawn per sitting using a 20-gauge sterile needle. Pain assessed by Visual Analogue Scale (VAS) decreased from 7/10 to 3/10 (57% reduction). Goniometric assessment of the first MTP joint showed flexion improvement from 25° to 45° (80% increase) and extension from 5° to 15° (200% increase).

Conclusion

Siravedhana demonstrated clinically meaningful improvement in pain and joint mobility within 7 days. However, as acute gout episodes can self-resolve within a similar timeframe, the contribution of treatment versus natural disease resolution cannot be confirmed from a single uncontrolled case. Controlled trials with objective inflammatory biomarkers are warranted.

Key-words: Vatarakta, Gout, Siravedhana, Bloodletting, Ayurveda, Joint Pain, Hyperuricemia, Case Report

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INTRODUCTION

In Ayurvedic pathophysiology, disease manifestations are invariably linked to perturbations of the Doshas, among which Vata holds primary regulatory importance due to its governance of neuromuscular activity, circulation, and systemic homeostasis. **Rakta** (blood), a vital Dhatu that sustains life and nourishes tissues, plays a pivotal role in inflammatory disorders. **Vatarakta** arises from the pathological interaction between aggravated Vata and vitiated Rakta, wherein Rakta obstructs the normal movement of Vata (Margavarana), resulting in acute pain, erythema, swelling, and functional restriction — predominantly affecting peripheral joints. Classical treatises such as the Charaka Samhita and Sushruta Samhita describe Uttana (superficial) and Gambhira (deep-seated) variants of the disease and advocate **Raktamokshana**, particularly Siravedhana (therapeutic venesection), as a principal intervention to eliminate vitiated Rakta and relieve obstruction.

Clinically, Vatarakta shares several features with gout — a crystal-induced inflammatory arthritis resulting from monosodium urate deposition secondary to hyperuricemia — though it is important to note that the two frameworks operate on different ontological bases. The correlation between Vatarakta and gout is best understood as a clinically useful analogy rather than a precise biomedical equivalence, as the Ayurvedic concept encompasses a broader spectrum of joint and systemic conditions governed by Dosha imbalance. Gout affects approximately 1–4% of the global population; a 2019 systematic analysis estimated over 41 million prevalent cases globally.^[1] Acute episodes are mediated by intense innate immune activation, including IL-1 β -driven inflammation, leading to severe pain and joint dysfunction. Recurrent attacks impair quality of life and contribute to renal and cardiovascular morbidity.

Despite effective urate-lowering therapies, limitations such as adverse effects, recurrence, and long-term adherence challenges necessitate the exploration of complementary

strategies. Siravedhana offers a mechanistically plausible integrative approach — conceptually addressing Vata-Rakta Dushti through Raktashodhana and potentially modulating inflammatory mediators and microvascular congestion. Systematic clinical documentation of such classical interventions may help bridge traditional Ayurvedic principles with contemporary inflammatory pathophysiology.

Nidana (Aetiology)

In Ayurveda, Vatarakta commonly affects individuals with delicate health, a sweet-rich diet, slow eating habits, and a sedentary lifestyle. It develops from factors that vitiate Rakta or aggravate Vata. Rakta is vitiated by consuming overly salty, sour, pungent, oily, hot, stale, or incompatible foods; eating before digestion is complete; excessive anger; daytime sleeping; night awakening; ignoring purification after injury; and poor body cleansing. Vata is aggravated by under-eating, certain penetrating vegetables, prolonged rides on animals or vehicles, heat exhaustion, excessive sexual activity, exposure to cold winds, overuse of pungent, salty, or hot foods, improper purification therapies, and excess intake of curd, fermented foods, buttermilk, or alcohol.

Pathogenesis: Improper diet and lifestyle increase and aggravate both Vata and Rakta. The vitiated Rakta obstructs aggravated Vata, causing both Doshas to circulate irregularly and lodge in the joints, leading to Vatarakta.

Primary sites: Hands, feet, toes, fingers, and joints — initially in hands and feet, later spreading.

Key symptoms: Tenderness to touch, sharp or piercing joint pain, muscle wasting, numbness, burning sensation, and redness with heat in affected areas.

Gout

In Ayurveda, Vatarakta corresponds analogously to gout — a condition caused by the accumulation of uric acid or sodium urate crystals due to elevated uric acid levels (hyperuricemia). These crystal deposits lead to painful inflammation in joints, tendons, and surrounding tissues, and may also result in tophi, kidney issues, or urinary stones.

Pathogenesis: Gout arises when uric acid production increases or its excretion decreases. Because humans lack the enzyme uricase, uric acid — formed from purine metabolism — accumulates in the blood. Normally, about two-thirds of uric acid is eliminated through the kidneys and one-third through the intestines. Excess uric acid leads to crystal deposition and joint inflammation.

Clinical Features: Pain, swelling, redness, and warmth occur suddenly, commonly affecting the first big toe joint (podagra). Repeated attacks may disturb sleep. Severe cases resemble cellulitis, and crystal deposits may form in joints or bones. Mild cases subside in two days, while severe ones persist for up to ten.

Treatment — Siravedhana in Vatarakta: Acharya Charaka recommended bloodletting (Raktamokshana) when symptoms shift between sites. Acharya Sushruta advised venesection in Vatashonita (the condition of vitiation of both Vata and Rakta, corresponding to Vatarakta) and related conditions, to be performed two Angulas (approximately 4 cm) above the Kshipra Marma — the vital anatomical point located in the web space between the first and second digits.

Case Report

A 27-year-old male presented with acute pain and swelling in the right first metatarsophalangeal (MTP) joint associated with difficulty in walking for one week. The

patient had previously received conventional analgesics at a rural healthcare centre without symptomatic relief. Laboratory investigations revealed elevated serum uric acid (>7 mg/dL) and raised erythrocyte sedimentation rate (ESR), indicating active inflammation. The gold-standard confirmatory test — synovial fluid aspiration with polarised light microscopy for monosodium urate crystals — was not performed due to resource constraints at the point of presentation. The clinical presentation was therefore consistent with, but not definitively confirmed as, clinically suspected acute gouty arthritis (podagra), which corresponds to Uttana Vatarakta in Ayurvedic literature. A mildly elevated RA factor was noted on pre-treatment serology. While the clinical and biochemical profile strongly favoured acute gout, early rheumatoid arthritis was considered as a differential diagnosis and the patient was counselled for further immunological workup at follow-up. Consequently, he reported to OPD No. 106 in the Department of Shalya Tantra at Parul Ayurved Hospital, Vadodara. As the patient had no renal impairment or bleeding disorders, Siravedhana (therapeutic venesection) was planned. Significant symptomatic improvement was observed post-procedure. This case highlights the clinical applicability of Raktamokshana in inflammatory monoarticular conditions.

Personal History

Sr. No.	Detail	Information
1	Name	XYZ
2	Age	27 years
3	Gender	Male
4	Marital Status	Unmarried
5	Occupation	Doctor
6	Date of Admission	14-09-2024



Chief Complaints and Duration

- Pain and swelling in the right foot for 1 week
- Difficulty in walking for 1 week

History of Present Illness

A 27-year-old male patient with the chief complaint of pain and swelling in the right foot and difficulty in walking for the last 1 week. He took various medications at the rural centre but did not experience relief, and subsequently presented to OPD No. 106, Department of Shalya Tantra, Parul Ayurved Hospital, Vadodara, for further treatment.

History of Past Illness

No prior hospitalisation or any serious illness.

General Examination

- G.C: Modest, Afebrile
- CVS: S₁ S₂ Normal
- Pulse: 79/min
- BP: 130/84 mmHg
- Height: 173 cm
- Weight: 85 kg
- Temp.: Afebrile
- RS: B/L Chest clear
- Pallor / Icterus / Clubbing / Oedema / Lymphadenopathy: Absent
- Tongue: Uncoated
- Digestive System: Appetite – Normal; Bowel – Constipated
- Uro-genital System: NAD

Ashtavidha Pariksha (Eightfold Examination)

- Nadi (Pulse): 79/min
- Mala (Stool): 1–2 times/day
- Mutra (Urine): 5–6 times/day
- Jihva (Tongue): Alipta (uncoated)
- Shabda (Voice): Normal
- Sparsha (Touch): Anushna Sheeta (neither hot nor cold)
- Druka (Eyes): Normal
- Akrti (Build): Madhyama (medium)

Investigations

Before Treatment

CBC revealed mildly low haemoglobin with normal RBC, WBC, and differential counts. ESR was mildly raised, indicating mild inflammation.

RFT values were within normal limits, suggesting intact renal function. RA Factor was mildly elevated, raising the possibility of early rheumatoid activity as a differential; this was to be further investigated at follow-up. Serum uric acid was elevated, consistent with hyperuricaemia and gout tendency.

Pre-Operative Protocol

- Counselling was done
- Written informed consent was obtained
- Part preparation was done prior to the procedure
- Instruments were checked and the trolley was prepared
- Snigdha Picchila Annapana (rice and curd) was given prior to the procedure
- The site of Raktamokshana was washed with Triphala Kwatha (a decoction of three myrobalans) and wiped with dry, sterilised gauze and covered with a cut sheet
- Haridra/Gairika Churna (turmeric/red ochre powder) was kept ready for dressing

Operative Procedure

The vein was selected according to the disease site. After proper oleation (Snehana) and sudation (Swedana), liquid gruel was given. The patient was then positioned in an erect or recumbent posture. Siravedhana was performed 2 Angula (approximately 4 cm) proximal to Kshipra Marma — the vital point located in the web space between the first and second metatarsals — corresponding anatomically to the dorsal venous arch of the foot.

Size of Puncture: In muscular areas, the puncture should be the size of a yava (barley grain); in other areas, it should be half a yava or 1 vrihi (rice grain). Accordingly, the puncture in the present case was sized as appropriate for the dorsal foot. Siravedhana was performed using a 20-gauge sterile disposable needle to ensure adequate blood flow and aseptic safety. A prominent superficial dorsal vein of the affected foot was selected for easy accessibility and effective drainage of vitiated Rakta. A



tourniquet was applied proximally to facilitate venous prominence and controlled blood withdrawal. Approximately 60–70 mL of blood was withdrawn over 8–10 minutes per sitting, allowing gradual decompression without haemodynamic instability. The volume withdrawn was guided by the patient's constitution (Bala — physical strength), colouration and character of the emerging blood (Arogya Lakshana per Sushruta Samhita, Sharirasthana), [2] and cessation of pathological features (Sampat) as described in classical texts. The procedure was conducted in two sittings (Day 0 and Day 7) with a 7-day interval, ensuring therapeutic effect while permitting physiological recovery.

Postoperative Care

Following venesection, sterile gauze with firm compression bandaging was applied. Haemostasis was achieved within 3 minutes, indicating normal clotting function and procedural safety. This standardised approach ensured effective bloodletting with minimal complications and optimal therapeutic outcome.

Pathya (Recommended Diet and Regimen):

- Warm water intake
- Light diet (Yavagu — gruel; Mudga Yusha — green gram soup)
- Avoid excessive walking for 24 hours

Apathya (Contraindicated Diet and Regimen):

- Curd, alcohol, red meat
- Excess salt and fermented food
- Day sleep

Local Care:

- Haridra–Gairika (turmeric–red ochre) application
- Sterile dressing for 24 hours
- No signs of infection noted

Assessment Tools

- Pain: Visual Analogue Scale (VAS)
- Mobility: Goniometric measurement of the right first MTP joint (hallux) in the sagittal plane — flexion (plantar flexion) and extension (dorsiflexion) — measured from the anatomical neutral (0°) position per the SFTR method, with the patient supine and the foot in a non-weight-bearing position.
- Timeline: Day 0 (pre-treatment) and Day 7 (post-treatment)

Results

After 2 sittings on Day 0 and Day 7:

Parameter	Pre-Treatment	Post-Treatment
VAS Pain Score	7/10	3/10
Flexion (1st MTP joint)	25°	45°
Extension (1st MTP joint)	5°	15°

Statistical Expression of Results

Pain Reduction — VAS: Reduced from 7 to 3. Percentage reduction = $(7-3)/7 \times 100 = 57.1\%$

Parameter	Pre	Post	% Improvement
Flexion (1st MTP)	25°	45°	80% increase
Extension (1st MTP)	5°	15°	200% increase



Patient Timeline

Day	Event	Findings / Outcome
1 week prior	Onset of acute right foot pain and swelling	Self-managed; tried analgesics at rural centre without relief
Day 0	OPD presentation; baseline assessment; 1st Siravedhana	VAS 7/10; Flexion 25°; Extension 5°; Serum uric acid >7 mg/dL; ESR raised; RA factor mildly elevated. ~65 mL blood withdrawn.
Day 7	2nd Siravedhana; post-treatment assessment	VAS 3/10; Flexion 45°; Extension 15°. No procedural complications.
Day 30	Follow-up review	Patient reported sustained symptomatic improvement; no recurrence of acute episode; advised further biochemical follow-up (uric acid, ESR, RA factor).

Patient Perspective

The patient reported a progressive reduction in joint pain and difficulty in walking following the two sittings of Siravedhana. He expressed satisfaction with the treatment outcome and willingness to return for follow-up investigations. He did not report any adverse events related to the procedure.

DISCUSSION

Vatarakta is described as a condition caused by the vitiation and mutual obstruction of Vata Dosha and Rakta Dhatu, leading to pain, swelling, redness, and restricted joint movement. The clinical features observed in this case resemble those of Uttana Vatarakta and correspond analogously to acute gout, where uric acid crystal deposition triggers intense joint inflammation. Dietary indiscretion and a sedentary lifestyle may further aggravate both hyperuricaemia and Dosha imbalance. Based on the predominance of Rakta Dushti, Siravedhana was selected as the treatment. As mentioned in Sushruta Samhita, Raktamokshana is indicated in inflammatory conditions involving vitiated Rakta. The procedure helps in Vata-Rakta Shamana, Raktashodhana, Srotoshodhana, and the removal of Margavarana.

From a biomedical perspective, it has been

hypothesised — based on general phlebotomy literature — that venesection may reduce circulating inflammatory mediators such as IL-1 β and TNF- α , improve microcirculation, decrease vascular congestion, and reduce local inflammatory burden. [3] However, no inflammatory biomarkers were measured in this case, and these mechanistic explanations remain speculative extrapolations requiring future controlled investigation.

A critical confound must be acknowledged: acute gout episodes are known to self-resolve within 7–10 days even without treatment. The timeline of improvement observed in this case — a 57% reduction in VAS pain score and improvement in joint mobility over 7 days — is entirely consistent with spontaneous disease resolution. Consequently, it is not possible to attribute the observed improvement definitively to Siravedhana rather than to the natural course of the illness. This limitation substantially tempers the conclusions that can be drawn from this single uncontrolled case.

Post-treatment serum uric acid and ESR were not re-assessed, representing an important gap. In a case attributed to hyperuricaemia-driven inflammation, the absence of post-treatment biochemical data means there is no objective evidence of any physiological change attributable to the intervention.



The patient was reviewed at Day 30 post-procedure, at which point he reported sustained symptomatic improvement and no recurrence of the acute episode. He was advised to return for repeat biochemical evaluation.

Limitations

The following limitations are acknowledged:

- Single case: findings cannot be generalised to the broader patient population.
- Absence of a control: without a concurrent untreated or differently treated comparator, causal attribution is not possible.
- Unconfirmed diagnosis: the gold-standard diagnostic test (synovial fluid aspiration with polarised light microscopy) was not performed; the diagnosis of gout remains clinically suspected.
- Subjective outcome measures: VAS is patient-reported and susceptible to subjective bias; goniometric measurements were not independently verified by a blinded assessor.
- Natural disease resolution: acute gout typically self-resolves within 7–10 days, making it impossible to attribute improvement solely to Siravedhana.
- Absence of post-treatment biochemical data: uric acid, ESR, and RA factor were not re-measured after treatment; no objective evidence of physiological change can be presented.
- Unresolved RA factor elevation: further immunological workup was recommended but not completed within the reporting period.

Conclusion

Siravedhana (therapeutic venesection) was associated with a significant reduction in pain and improvement in joint mobility in this case of clinically suspected acute Vatarakta corresponding to gout. A 57% reduction in VAS pain score within 7 days, along with substantial gains in first MTP joint mobility (80% increase in flexion and 200% increase in extension), indicates meaningful functional change. The patient reported sustained improvement at 30-day follow-up without procedural complications, confirming procedural safety when performed with anatomical precision and aseptic measures.

From an Ayurvedic perspective, the outcome supports the principles of Vata-Rakta Shamana, Raktashodhana, and removal of Margavarana. Biomedically, venesection may reduce local inflammatory mediator burden and improve microcirculation — though this remains a hypothesis requiring direct measurement.

It must be noted, however, that the observed improvement is also consistent with the natural resolution of acute gout. As this is a single uncontrolled case without post-treatment biochemical verification, these findings should be regarded as preliminary and hypothesis-generating. Further randomised controlled studies with objective inflammatory biomarkers are warranted to establish standardised protocols and strengthen evidence-based integration of Siravedhana in contemporary practice.



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