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Review Article

Clinical Improvement in Painful Diabetic Peripheral Neuropathy Following Ayurvedic Management: A Case Report

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Abstract

Painful diabetic peripheral neuropathy (DPN) frequently compromises comfort and function in people with diabetes, and symptoms may continue despite conventional medicines. We report the course of a 58-year-old man with a 20-year history of type 2 diabetes mellitus who experienced burning and tingling in all four limbs while receiving standard treatment. Neurological assessment demonstrated distal sensory impairment in a glove-and-stocking pattern, weak ankle reflexes, and reduced appreciation of vibration. The clinical diagnosis was DPN, interpreted as Vatarakta within the Ayurvedic framework. Management comprised Shalishastika Pinda Swedana, Saghrita Panchatikta Basti, and oral Ayurvedic preparations. By the end of two months, the modified Neuropathy Disability Score had fallen from 8 to 1; pain and daily functioning had also improved markedly. The observed clinical response

supports evaluation of this combined regimen in controlled studies.

Keywords: *Ayurveda; Type 2 diabetes mellitus; Diabetic neuropathies; Neuropathic pain; Panchakarma*

Introduction

Among the chronic consequences of diabetes mellitus, DPN is particularly frequent and may lead to sensory deficits, neuropathic pain, and loss of function, especially after many years of disease.^[1] Persistent hyperglycaemia can injure peripheral nerves through interconnected mechanisms that include excess oxidative stress, mitochondrial injury, AGE-RAGE activation, and inflammation.^[2]

Medicines used for symptomatic relief include anticonvulsants, antidepressants, and topical agents; nevertheless, a proportion of patients continue to

have pain and activity limitation.^[3] This continuing burden has encouraged interest in complementary approaches, including Panchakarma procedures and Ayurvedic formulations, although clinical evidence is still sparse. The present report documents a patient with painful DPN whose symptoms were not adequately relieved by pregabalin and who subsequently underwent Ayurvedic treatment. Neurological status was recorded with validated measures and reassessed after two months.

Patient Information

After 20 years of type 2 diabetes mellitus, a 58-year-old man developed burning and tingling of the upper and lower limbs, together with pain in the lower back and buttocks. These symptoms had persisted for one year despite conventional medical care. Pain intensity was 10/10 on the Visual Analogue Scale (VAS).^[4] He worked as a manual labourer, used tobacco daily, and did not consume alcohol. His family history was negative for both diabetes mellitus and peripheral neuropathy. He had never been diagnosed with diabetic retinopathy, nephropathy, or a foot ulcer.

His known comorbidities were hypertension, hypothyroidism, and insomnia. At presentation, regular medicines were metformin 500 mg twice daily, levothyroxine 100 µg once daily, telmisartan 12.5 mg once daily, and alprazolam at night. HbA1c was 9.1%. A previous course of pregabalin had provided insufficient relief. Additional complaints included low mood, anxiety, tremor, a persistent sense of cold, and long-standing constipation.

Clinical Findings

On examination, he appeared anxious and was experiencing pain. Blood pressure was 130/90 mmHg and pulse was 107/min; he weighed 75 kg and was 160 cm tall, with a recorded BMI of 28 kg/m². Ayurvedic assessment identified Vata-Pitta Prakriti and Madhyama Sara.

Deep tendon reflexes were reduced, particularly at the ankles. Pinprick and light touch were diminished distally in a glove-and-stocking distribution, and vibration at both great toes was poorly perceived when tested with a 128-Hz tuning fork. Mild

weakness was present in the intrinsic muscles of the hands; power in the lower limbs was preserved.

Timeline

Time from presentation	Event or finding
~20 years earlier	Type 2 diabetes mellitus diagnosed
~1 year earlier	Burning and tingling began in all four limbs, accompanied by lower-back and buttock pain
2 weeks earlier	Brain MRI identified chronic small-vessel ischaemic changes
Day 0	Ayurvedic consultation and initial neurological assessment: modified NDS 8 (moderate neuropathy)
Day 1	Mridu Virechana using 20 mL castor oil with warm milk
Days 1-28	Shalishastika Pinda Swedana performed daily
Days 1-16	Concurrent course of Saghrita Panchatikta Pancha Prasritika Basti
Days 1-60	Madhumehari Churna, Ashwagandha Churna, Dashamoola Kwatha, Kaishore Guggulu, and Shiva Gutika given orally twice daily
1 month	Modified NDS decreased to 3 (mild neuropathy)
2 months	Modified NDS decreased to 1, below the diagnostic threshold; marked improvement in pain and functional status

Diagnostic Assessment

Results of the complete blood count and liver, renal, and thyroid panels were unremarkable. Vitamin B12, 25-hydroxyvitamin D, inflammatory markers, and autoimmune screening were also normal. The HbA1c value of 9.1% showed inadequate glycaemic control. A brain MRI obtained two weeks before the consultation showed incidental chronic small-vessel ischaemic changes only. The combination of long-duration diabetes, symmetric distal sensory deficit,

loss of vibration sense, and depressed ankle reflexes supported a clinical diagnosis of DPN. Normal laboratory findings and absence of relevant signs argued against vitamin B12 deficiency, hypothyroid neuropathy, uraemic neuropathy, chronic inflammatory demyelinating polyneuropathy, and autoimmune neuropathy. Because pain also involved the lower back and buttocks, diabetic amyotrophy (diabetic lumbosacral radiculoplexus neuropathy) was considered.^[5] In the Ayurvedic assessment, the presentation corresponded to Vatarakta; this interpretation informed treatment selection.

Therapeutic Intervention

The regimen was selected according to the Ayurvedic management of Vatarakta. On the night preceding the treatment course, Mridu Virechana was performed with 20 mL castor oil and warm milk. Shalishastika Pinda Swedana was then provided daily for 28 days, while Saghrita Panchatikta Pancha Prasritika Basti was given for 16 days. Oral treatment consisted of Madhumehari Churna 5 g, Ashwagandha Churna 500 mg, Dashmoola Kwatha 40 mL, Kaishore Guggulu 500 mg, and Shiva Gutika 500 mg, each administered twice daily. These oral medicines were maintained for one month after Panchakarma, so that the entire treatment period was approximately two months. Metformin, levothyroxine, telmisartan, and aprazolam were continued at their existing doses.

Follow-up and Outcomes

Clinical change was documented with the modified Neuropathy Disability Score (NDS) and a composite neuropathy severity instrument scored out of 19 points.^[6]

Outcome measure	Before treatment
Modified Neuropathy Disability Score (range 0-10)	8
Composite neuropathy category	Moderate

At the end of two months, the patient described less pain, better sleep, improved balance, and greater walking endurance. He had resumed his usual work. Adherence was maintained, and neither the Panchakarma procedures nor the oral medicines were

associated with an observed adverse event during treatment.

Discussion

For people with diabetes, persistent neuropathic pain can substantially restrict daily life; painful DPN is a common cause, even when standard drug options are available.^[7] In this patient, symptoms remained severe after pregabalin but became less troublesome during the combined course of Panchakarma and oral Ayurvedic medicines. Current understanding links DPN to sustained oxidative stress, mitochondrial injury, AGE-RAGE pathway activation, and chronic inflammatory activity.^[8]

Within the Ayurvedic diagnostic framework, the pattern was interpreted as Vatarakta, and management was organised accordingly. The protocol included Mridu Virechana, Shalishastika Pinda Swedana, Saghrita Panchatikta Pancha Prasritika Basti, and oral medicines. Those formulations are traditionally used with the aims of easing pain, supporting tissue recovery, and improving metabolic regulation. Evidence specifically evaluating them in DPN, however, remains limited.

Published case reports describe symptomatic benefit after Panchakarma-based care for painful DPN, although treatment schedules and outcome instruments vary and follow-up is generally brief.^[9-11] In the current patient, changes were recorded at one and two months. The modified NDS declined from 8 to 3 and then to 1, while composite grading moved from moderate to mild and finally below the diagnostic threshold. These objective measures complement the patient's account of pain relief and improved function. The response has practical implications but should be interpreted cautiously. For selected individuals whose painful DPN remains troublesome despite conventional medicines, Ayurvedic care might be considered as an adjunct after individual clinical assessment. The concurrent improvement in neurological score and everyday function, together with the absence of observed treatment-related harm,

provides a rationale for controlled evaluation of this regimen.

Limitations

Interpretation is constrained by observation of only one patient, lack of a comparison group, limited nerve-conduction evaluation, and brief follow-up. Biochemical tests were not repeated, and the patient-reported measures were not validated. Consequently, neither the contribution of altered glycaemic control nor a causal effect of the Ayurvedic regimen on neurological recovery can be determined.

Novelty of the Study

The distinctive feature of this report is the objective neurological improvement recorded over two months in a patient whose symptoms had been inadequately relieved by pregabalin and who then received a structured Panchakarma-based Ayurvedic regimen. Change was documented with the modified NDS and composite neuropathy grading in addition to the clinical symptoms.

Contribution to Current Literature

By documenting complementary care with neurological outcome instruments rather than symptoms alone, this report adds an objectively assessed case to the small body of literature on Ayurvedic treatment for painful DPN.

Conclusion

Painful DPN can remain disabling even during conventional pharmacological care. In this patient, a two-month Ayurvedic regimen that combined Panchakarma with oral formulations was followed by reductions in neurological disability and pain, together with recovery of daily and occupational function. A single case cannot demonstrate causation; nevertheless, the observed course indicates that this approach may merit consideration as adjunctive care in carefully selected patients. Controlled investigations are needed to define its effectiveness and safety.

Informed Consent:

Written informed consent was obtained from the patient for preparation of the report and publication of the relevant clinical details.

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Reporting Guideline:

Preparation of this manuscript followed the CARE reporting guidance for case reports.

Data Availability Statement

No dataset beyond the clinical information presented in this report is available.

Conflicts of Interest

No author reports a conflict of interest relevant to this case.

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Protocol registration

Not applicable to this single case report.

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