



A Case of Diabetic Sensory Polyneuropathy Successfully Managed with *Atibalamoola Kvatha*: A Case Report

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Abstract

Case history: In December 2016, a 65 years old female patient having diabetes mellitus since 8 years and hypertension since 5 years, came to the P D Patel Ayurveda hospital, Nadiad with complains of burning sensations, pain along with numbness in both lower limbs for 10 months. She was assessed by signs and symptoms along with laboratory investigations and neuropathy test (by neuropathy analyser machine) and diagnosed with diabetic sensory polyneuropathy. She was treated with *atibalamoola* (root of *Abutilon indicum* Linn.) *kvatha* 10 g two times in a day orally for total duration of 4 weeks. Quantitative sensory testing was done with the neuropathy analyser vibrotherm Dx from Diabetic Foot care, for detection of vibration, hot and cold sensation threshold. The patient was assessed on every 2 weeks.

Results: She got satisfactory relief in all the signs and symptoms. Patient is able to identify the vibration sensation with only 12 frequencies per second which suggest normalcy. Cold sensations are also noticed at 20°C. Earlier it was noticed at 18°C by the patient. Hot sensations also improved markedly by noticing it at 45°C which was not noticeable earlier even at 49.4°C.

Keywords: *Diabetic neuropathy, Atibala, Abutilon indicum*



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INTRODUCTION

Peripheral sensory poly-neuropathy is the most common neurological syndrome seen in diabetes¹. This process involves all somatic nerves but has a strong predilection of distal sensory nerves of the feet and lesser extent to hands. Initially, most of the patients with peripheral neuropathy are asymptomatic, with subtle abnormalities on examination, including the loss of vibration sense, light touch, two point discrimination and thermal sensitivity. Once they become symptomatic, patients typically report numbness and tingling sensation, often in their classic “stoking-glove” distribution². No any conventional modern treatment exists to prevent or reverse neuropathic changes or to provide total pain and other symptomatic relief. Clinical guidelines recommend symptomatic relief through the use of antidepressants such as amitriptyline and duloxetine, the γ -aminobutyric acid analogues gabapentin and pregabalin, opioids and topical agents such as capsaicin. After some time they become in-effective and also develop some unwanted effects i.e. drowsiness, anticholinergic effects, potentiating of cardiac arrhythmias, dizziness, headaches and diarrhea.

PRESENT HISTORY AND CLINICAL CONCERNS

A 65 year old female patient was diagnosed with type 2 Diabetes Mellitus since 8 years and hypertension since 5 years. She is taking combination of Glimperide 1mg and Metformin 500 one tablet once in a day for diabetes mellitus and combination of Amlodipine 5mg and Losartan 50mg one tablet in a day for hypertension. In spite of that, since last 10 months she was feeling pain, burning sensation, tingling sensation and numbness in both feet with burning sensation in palms. She also had unusual feeling when her feet touched the ground or when she was wearing footwear. Sometimes she lost her footwear from her feet unknowingly also a very soft and spongy feeling on feet. Because of all these complains, she was having difficulty while walking and decreased sensations in feet. She also took injections of multi-vitamins for a period of 4 weeks as prescribed by a physician. She has also taken fluoxetine 60 mg once in a day for 3 months period and then discontinued due to excessive sleep and drowsiness effect. She got limited relief with fluoxetine in pain but didn't get relief in other symptoms. Finally she came to P. D.



Patel Ayurveda hospital, Nadiad in December 2016 for the alternative treatment.

CLINICAL FINDINGS:

On the first visit, patient was conscious with intact mental status but looks anxious and her Blood Pressure was 130/80 mm of Hg, Pulse 72/min, Respiration rate 19/min and regular. Random blood sugar was 86 mg/dl with regular intake of anti-hyperglycemic drugs as mentioned above.

Table 1 Initial findings of vibration, cold and hot sensations

Sensations	Right foot	Left foot
VIBRATION	Severe(31)	Moderate(25)
COLD	Mild(18.4)	Mild(17.2)
HOT	Severe(48.6)	Severe(49.4)



Figure 1: Neuropathy Analyzer machine

DIAGNOSTIC FINDINGS

Diagnosis was confirmed with clinical signs and symptoms i.e., numbness, pain, tingling and burning sensations in the feet and palm. Impairment in vibration, cold and hot sensations were noted with the help of VibrothermDx neuropathy analyzer (see table - 1). Vibrotherm is a machine specially

prepared by a diabetic foot care company of Chennai (see figure - 1), for the numerical assessment of the vibration, cold and hot sensation thresholds in the diabetic patients. Criteria for evaluation of vibration, heat and cold sensations by neuropathy analyzer was mentioned in table -2.

Table 2 Criteria for evaluation of sensations

Sensations	Normal	Mild	Moderate	Severe
Inability to feel vibration	Up to 15 fr/sec	16-20 fr/sec	21-25 fr/sec	≥ 26 fr/sec
Inability to feel hot	Up to 42°C	43-45°C	46-48°C	≥ 49 °C
Inability to feel cold	Up to 20°C	19-15°C	14-10°C	≤ 9 °C

THERAPY:

Atibalamoola (root of *Abutilon indicum* Linn.) *kvatha* 40ml (prepared according to the classical formation of the *kvatha* from 10 g of crude drug) two times (morning and evening) in a day was given to the patient on empty stomach for one month period.

All the conventional modern medicines for blood sugar level and for hypertension mentioned above were continued along with this therapy.

OUTCOMES:

Vibration sensation became normal in right foot and mild in left foot after the treatment. Cold sensations were normal while hot sensations were also improved in both the



feet (see more in table -3). Signs and symptoms were also improved day by day.

Pain and burning sensations were

disappeared while numbness and tingling sensations were improved (see table - 4).

Table 3 Improvement in sensations after the one month treatment

	Sensation	24/12/16	09/01/16	23/01/16
Right foot	Vibration	Severe(31)	Moderate(25)	Normal(12)
	Cold	Mild(18.4)	Normal(19.8)	Normal(19.8)
	Hot	Severe(48.6)	Normal(40)	Mild(44.8)
Left foot	Vibration	Moderate(25)	Moderate(25)	Mild(17)
	Cold	Mild(17.2)	Normal(20.2)	Normal(20.4)
	Hot	Severe(49.4)	Mild(42.6)	Moderate(46.8)

Table 4 Improvement in signs and symptoms

Sign and symptoms	Before Treatment	After Treatment	
		2 weeks	4 weeks
Pain	Almost daily and impair routine work	Often (more than 3 times in a week)	Absent
Numbness	Often (more than 3 times in a week)	Occasional (less than 3 times in a week)	Occasional (less than 3 times in a week)
Burning sensation	Often (more than 3 times in a week)	Occasional (less than 3 times in a week)	Never
Tingling sensation	Almost daily which responsible to impair routine work	Often (more than 3 times in a week)	Occasional (less than 3 times in a week)

DISCUSSION

Sensory polyneuropathy occurs because of damage to the nerves. In Ayurveda, In *Prameha* the extract or fine products of all the *dhatu* are come out through urine and due to *dhatukshaya* and it leads provocation of *vata* again. *Suptata* (numbness), *shoola* (pain) and tingling sensation are because of vitiation of *vata dosha*. Hence, *Balya*, *rasayana* and anti- *vata* therapy is helpful in this case.

Atibala is well known as *vata* pacifying medicine by its properties i.e., *shita virya*,

madhura rasa and *balakruta*³, *tridosahara*⁴ and *rasayana*⁵ effect.

CONCLUSION

High prevalence of diabetic sensory polyneuropathy with its health and socio-economic impact and the need for updated evidence-based treatment and impressive effect of this treatment can make this single case report of particular interest.



REFERENCES

1. Callaghan BC, Cheng HT, Stables CL, Smith AL, Feldman EL Lancet Neurol. 2012 Jun; 11(6):521-34
2. Goldmann's Cecil medicine 24th Ed. By Saunders , an imprint of Elsevier Copyright,2012 edited by Lee Goldman and Andrew I Schafer,chapter 428.pg-2406
3. PanditBhavmishra, BhavprakashNighantu, Purvakhanda, GuduchiyadiVarga/271, commented by ViswanathDiwedi. 9th ed. Varanasi: MotilalaBanarasidasPrakashan; 1998
4. Ibidem (3) DhanvantriNighantu, GuduchyadiVarga/271
5. Susruta, SusrutaSamhita, Chikitsathana, Adhyaya 27/10. Edited by VaidyaYadavjiTrikamjiAcarya and NarayanramAcarya. 4th ed. Varanasi; Chaukhamba Orientalia: 1980