

## BALADI YAPANA VASTI IN DIABETIC PERIPHERAL NEUROPATHY- A CASE STUDY

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### ABSTRACT

This paper discusses a patient seen in the outpatient of PG Dept of *Panchakarma* at Dr.B.R.K.R Govt Ayurvedic Medical College and hospital, Hyderabad. His chief complaint was increasing weakness, burning sensation, pain, numbness and cramps in his lower extremities over the past 8 years. Past medical history includes a 13 year history of diabetes mellitus, and a history of alcohol abuse. Based on the full health history and physical examination, a diagnosis of Diabetic peripheral neuropathy was made. This paper discusses the probable correlation of this condition according to *Ayurveda* based on the *dosha* and *dushyas* involved (i.e., *Samprapthi*). So the treatment plan was based on the axonal degeneration secondary to diabetic neuropathy (viz..*Vata vyadhi*). Hence *Baladi yapana vasti* (*Brimhana* type of *vasti*) in the form of 2 cycles of *yoga vasti* is selected for the management in this case.

**Keywords:** Diabetes mellitus, Peripheral neuropathy, *Vatavyadhi*, *Brimhana vasti*, *Baladi Yapana Vasti*.

### INTRODUCTION:

A 58 Year old male patient having weight of 90kgs came with complaints of increasing weakness, burning sensation, pain, numbness, altered sensation and cramps in his lower extremities. Detailed history of present illness revealed that Progressive weakness and pain along with burning sensation started approximately 8 years ago with right leg first and then left. Pain is worse when first arising from chair or bed and whenever engaged in prolonged activity. Patient denies any range of motion (ROM) limitations, but does take longer to do activities of daily living (ADL's). No weakness and pain in upper extremities (UE). Reports frequent episodes of numbness below calves, cramps

in both calf muscles and altered sensation in both feet. No H/O tremors, twitching, swelling, redness, or tenderness in muscles or joints. No H/O arthritis, or musculoskeletal trauma and no history of Allergies to any known drugs.

**Medications:** Captopril 50mg 1BD BF and Insulin 15 units in morning and 10 units in night.

**Past Medical History:** Diabetes mellitus (DM) for 13 years and Hypertension (HTN) since 3 years. No H/O coronary artery disease (CAD) or known peripheral vascular disease. NO H/O any previous surgeries.

**Family Medical History:** Mother (78y.o.) with HTN; father died at age 56 from car accident; 3brothers (55 - 48 y.o.), one with

HTN and DM and one with alcohol abuse. No H/O any known CAD, cerebral vascular accident (CVA), cancer (CA) in family.

**Personal History:** Smokes ½ packs per day since 22 years. 3-4 beers/day, up to 6-8/day on Sundays and holidays. Denies illicit drugs, Working as driver for industrial truck (heavy vehicle) since 20 years. Before that he worked as RTC bus driver.

**Review of Systems:** The examination of individual systems revealed no abnormalities, other than excretory system, the patient passes excess amount of urine i.e., approximately 1500-1800 ml/day with increased nocturnal frequency. Also the bowels are constipated with hard stools passing once in 2-3 days. The *prakruthi* of the patient was *vatapitta* and he had *Teekshagni* (probably due to high circulating glucose levels), Patient had *madhyama satmya*, *samhanana* and *sara* and has *alpa satwa* and *vyayama shakti* with *sthula aakruthi*.

**Table No: 1 Neuropathy Disability score<sup>1</sup>**

Parameter	Grade 0	Grade 1	Grade 2	Total sum for both rt and lt lower limbs
Ankle Reflex	Normal reflex	Present on reinforcement	Absent	4
Vibration	Present	Reduced/Absent	–	2
Pin Prick	Present	Absent	–	2
Temperature	Present	Absent	–	2

Maximum abnormal score is 10, Score of 3-5: symptoms of mild Neuropathy, Score of 6-8: symptoms of moderate Neuropathy, Score of 9 or 10: symptoms of severe Neuropathy

**Rationale behind Selection of Panchakarma Procedure and Drugs:**

There is no direct reference of this disease in our lexicons. But basing on symptoms, cause etc the *dosha* and *dushyas* involved can be assessed and accordingly treatment

**Physical Examination:** weight is 90 kgs and height is 168 cm, *varna* is *prakrutha*, *nadi*:82/min, *swasagati*: 27/min, *Dehoshma*: 98.5<sup>0</sup>F, *Ardra* and *saama jihwa*, *Anushna seeta sparsha*, *Nakha*: no e/o cyanosis or cracking, *Raktachapa*: 134/96mmHg

**MATERIALS AND METHODS:**

Scoring was given to all the symptoms patient complained about i.e., Grade 0 for nil symptoms, Grade 1 for mild symptoms, Grade 2 for Moderate symptoms and Grade 3 for Severe symptoms. Along with this, the objective/qualitative assessment was done using Neuropathy Disability score. Neuropathy Disability score is the commonly employed bed side examination procedure to find out vibration perception using tuning fork, ankle reflex (the most common reflex to be affected in Peripheral Neuropathy) using knee hammer, temperature perception using cold tuning fork on sole and light touch using pin

can be provided. In this particular disease, predominance of *vata dosha* is very much appreciated. The definition of *vata* is “*Vaagati gandhanayoh*”. Where in *gati* is interpreted as motor and *gandhana* is interpreted as sensory functions of Nervous System by various *Ayurvedic* scholars. It is also interpreted that *vata* is the prime *dosha* that governs the Nervous system. Among *asithi vata vyadhi*, few conditions like *padashula*, *supatapadata*, *bahu sosha*, *vepathu*<sup>2</sup> are men-

tioned. Also in *vata vyadhi samanya lakshanas, spandana, gatra suptata, toda, akshepa*<sup>3</sup> etc are enumerated. All these are some of the symptoms of Peripheral Neuropathy. Hence peripheral Neuropathy can be considered as one of the types of *vata vyadhi*. Basing on this the treatment protocol is selected in the present study. The treatment of PN according to Modern medicine include usage of NSAID, Tricyclic anti depressants, Steroids etc, which have potential side effects. Hence proper treatment for this condition remains obscure, making it difficult to treat<sup>4</sup>.

Treatment which is cost effective, which improves the quality of life in the patient and with nil or minimal side effects is the need of hour in this particular disease. Ayurvedic management appears to offer all the above mentioned criteria. Generally in *vata vyadhi Brimhana* among *shad upakramas* is highly indicated<sup>6</sup>. *Vastikarma* has been doing wonders in the treatments of *Ayurveda*. Though it has been indicated for almost all the diseases, the prime importance of *vastikarma* has been specified in the management of *vata vyadhis*.

From the above description it is understood that *brimhana* type of *vasti* is the requirement for the management of Peripheral neuropathy. Hence *Yapana Vasti* is selected for the present study as it is *brimhana* type of *vasti*. The drugs present in *Baladi Yapan Vasti (Ch. Si 12/13)* are very cost effective, easily available and without any

known side effects. No *anuvasana* is given because this is *mridu* form of *vasti*.

**Contents and Method of Preparation of *Baladi yapana vasti (Charaka Siddhi 12/13)*:**

- The *Kashaya dravyas Bala, Atibala, Kapikachu* and *Apamarga* each 30gms and *Yava* 120 gms were taken. This is added to 500ml cow milk and 1000ml water and boiled until only the quantity of milk i.e., 500ml remained.
- In *khalva yantra saindhava lavana* and water soaked with *guda*(50 ml) overnight was mixed.
- To this 100 ml of *go ghrita* and 100ml of *Tila taila* was added and properly triturated. Later *kalka dravyas i.e., Pippali, Yashti Madhu* and *Madanaphala* each 10 gms were added and properly mixed in the *Khalva Yantra*.
- The *kashaya* prepared earlier was added to this mixture in *khalva yantra*. The entire material was properly mixed. The measurement of final product was about 700ml.
- This was given to the patient in the form of 2 cycles of *Yogavasti* (8 days each), with a gap of 7 days between two cycles.
- Follow up: The patient was asked to follow a *pariharakala* of 7 days and was asked to report on 9th, 24th and 46th days counting from the day the treatment started for follow up and observation.

**RESULTS:**

**Table no: 2 Scoring of Neuropathic symptoms before and after treatment**

	Pain	Weakness	Burning Sensation	Cramps	Numbness	Altered Sensation	Total Score
<b>BT</b>	3	3	3	3	2	2	16
<b>AT</b>	1	1	1	2	1	1	7

**Table No: 3 Scoring of NDS before and after Treatment**

Parameters	Rt. Side		Lt. Side		Score	
	BT	AT	BT	AT	BT	AT
<b>Ankle Reflex</b>	1	1	1	1	2	2
<b>Vibration</b>	1	0	1	1	2	1
<b>Pin Prick</b>	1	0	0	0	1	0
<b>Temperature</b>	1	0	1	1	2	1

Total NDS score before treatment was 7 and after treatment was 4. Percentage of relief in both Symptoms and NDS after treatment was 52.18% (moderate relief) Lab Investigations (FBS and PLBS) were done before and after treatment as well

**Table 4: FBS and PPBS before and after treatment**

	Before Treatment	After Treatment
<b>FBS</b>	170mg/dl	147mg/dl
<b>PPBS</b>	290mg/dl	172mg/dl

**DISCUSSION:**

Role of *Vata* is indispensable as the entire nervous system is under the control of *vata*. Two cardinal patterns of *vata vyadhi* is mentioned<sup>5</sup>.

1) *Dhatu Kshaya*, 2) *Margavarodha*

From the above description of pathology of PN according to modern it is clearly understood that the major pathology lies at Axon and Schwann cell that produces the Myelin sheath. *Dhatu Kshaya*: In PN at micro level, there is degeneration of Schwann cells causing demyelination followed by axon degeneration. This particular condition can be considered as *dhatu kshaya at asthaya* or *sookshma* level as there is deprivation of myelin (principal constituents being *rasa, medo and majja dhatus*). While mentioning the *samprapti* of *Vata Vyadhi* it is said that “*srotases* which are devoid of *sneha* get filled up by *balavan vayu* causing different diseases either systemic (*sarvanga*) or local (*ekanga*)<sup>6</sup>. Hence *Dhatu kshaya* in PN is clearly understood. Though the role of *Vata* is found at large in PN, the role of *Pitta* and *Kapha* cannot be neglected as it is said that all diseases are *Tridoshaja* according to

*Ayurveda*. Few of the symptoms seen in PN also show the impact of *Pitta* and *Kapha* i.e., *Kara Pada Daha* (burning sensation of palms and soles). At the same time it is also mentioned that *Pitta, Kapha* and all other *Dhatus* and *Malas* are crippled and its only *vata* that controls all these components of the human body. Hence correction of *Vata* is very important so as to bring normalcy to the body<sup>7</sup>. *Vasti* is one of the important therapies amongst all the treatments of *yurveda* hence *c rya caraka* described that “*Sarvam Chikits mapi Chikits rdhimiti br hanti*”. Therefore, *Vasti* can be administered in almost all diseases and also in all conditions. Further *c rya su ruta* described that *Vasti* is not only indicated in *V tavy dhis* but also in *Pittaja, Kaphaja* and *Rakta Vik ras* and even in *Samsarga* and *Sannip ta Vik ras*. Its sphere of action is from head to toe ( *pada Mastak*). *Basti* has multidimensional properties. It acts as *Ras yana ,V i ya* (Aphrodisiac), *Brimha* (Anabolic) and *Lekhana*. Extensive description regarding *Yapana Vasti* is found in *Ch.Siddhi Sthana*. There it has been quoted that *Yapana Vasti* is that form of

*vasti* which can be administered to *aatura* and *swastha* as well without much complications. The function of this *vasti* as mentioned in classics as *Balya* and *Brimhana* causing *Poshana* of *Dhatu*. Hence this Particular form of *Vasti* is more indicated in *Dhatu Kshaya*. *Yapana Vasti* is indeed *Rasayana* type of *Vasti*, its role in regeneration of lost myelin/axon can be expected. The drugs in *Baladi Yapana Vasti* i.e., *Bala*, *Atibala*, *Kapikachu* and *Apamarga* contain higher amounts of Flavonoids<sup>8</sup> (which have neuroprotective action). This confirms to their *Rasayana* property/action.

### CONCLUSION:

After follow up period, the patient was maintained on *nishamlaki vati* 2BD, along with his regular allopathic medication. No exacerbation/ aggravation of symptoms is noted after the follow up period. Hence it can be concluded that *Baladi yapana vasti* in the form of *Yoga vasti* is safe and efficacious treatment modality for Diabetic Peripheral Neuropathy. As all the drugs in *Baladi Yapana Vasti* have Anti oxidant, Analgesic, Anti inflammatory, Neuro preventive and hypoglycaemic properties in common, making them the best set of available drugs for Diabetic Peripheral Neuropathy. Further studies are to be conducted on this as the present paper is a single case study. Trial in a larger sample is required to generalise the outcome.

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