WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 6, 882-888. Case Study ISSN 2277– 7105

AN AYURVEDIC MANAGEMENT OF DIABETIC NEUROPATHY: A SINGLE CASE STUDY

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Article Received on
26 Feb. 2023,

Revised on 18 March 2023,
Accepted on 08 April 2023

DOI: 10.20959/wjpr20236-27848

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ABSTRACT

Madhumeha, a subtype of Vataja Prameha, is similar to diabetes mellitus in Ayurveda. Kapha, Pitta, and Meda vitiate Vata in Avarnjanya Madhumeha, aggravating it and diminishing vital Dhatus. Diabetes-related neuropathy is a potential complication of Madhumeha. 30% of people with diabetes experience neuropathy as a result of their condition. Microvascular damage in nerve-supplying blood vessels and macrovascular conditions can lead to diabetic neuropathy. Despite the fact that insulin and hypoglycemics have helped diabetics, their neuropathy complications remain untreated. The sensory polyneuropathy associated with diabetes is characterised by diminished vibration perception and impairment of all other senses. Vata and Pitta Dosa, according to Ayurveda, cause diabetic neuropathy. In Ayurvedic texts, Suptata (numbness) and Daha (burning sensation) in body parts, particularly the hands, and feet, are described as Purvarupa of Prameha. Daha is one of the Upadravas (complications) of Prameha. Symptoms of diabetic neuropathy are frequently observed. Diabetics frequently develop neuropathy. Traditional medicine employs tricyclic antidepressants, anticonvulsants, opiates, membrane stabilizers, and antioxidants to treat diabetic peripheral polyneuropathy. These drugs have adverse effects. Therefore, alternative therapies must be more secure and efficient. The current study presents the case of a 64-year-

old male with hypertension, diabetic melilotus, neuropathy, and nephropathy as complications of diabetes. The patient was given ayurvedic medication for 21 days, and promising results were found

KEYWORDS: Diabetes, neuropathy, Madhumeha, Ayurveda.

INTRODUCTION

Diabetes is the most prevalent and severe metabolic disorder in the world. Chronic disorders of carbohydrate, lipid, and protein metabolism resulting in insulin deficiency or dysfunction. In 1980, there were 108 million diabetics, compared to 422 million in 2014. The worldwide prevalence of diabetes among adults increased from 4.7% in 1980 to 8.5% in 2014. In the past decade, diabetes has increased more rapidly in low- and middle-income countries than in high-income countries.[1] In 2012, the World Health Organization reported 1.5 million diabetes-related deaths and 2.2 million high blood glucose-related deaths, of which nearly half occurred in people younger than 70. The WHO anticipates that diabetes will be the seventh leading cause of death in 2030.[2] Long-term complications of diabetes include diabetic neuropathy, kidney disease, stroke, blindness, and heart disease.

Diabetic neuropathy is the most common complication associated with diabetes mellitus. Sixty to seventy percent of diabetic patients will develop neuropathy during the course of their treatment, according to estimates.[3] Patients can develop nerve issues at any time, but the risk rises with age and diabetes duration. Patients may at any time develop nerve problems.[4] People with diabetes for at least 25 years are more likely to develop neuropathy than those with diabetes for a shorter duration. Diabetic neuropathy is defined as "the presence of symptoms and/or signs of peripheral nerve dysfunction in people with diabetes after the exclusion of other causes," according to a consensus statement produced by an international meeting on the diagnosis and management of diabetic neuropathy.[5] The term "diabetic neuropathy" refers to the more permanent signs and symptoms of peripheral nerve disorder that persist for weeks or months despite the resumption of good diabetic control and that almost always appear only after months or years of grossly neglected or improperly managed diabetes treatment. In the affected area, these signs and symptoms include tingling, burning, pain, and numbness. Diabetic neuropathy is caused by nerve damage likely caused by a combination of metabolic, autoimmune, neurovascular, lifestyle, mechanical injury, and inherited traits.[6] Peripheral diabetic neuropathy can cause tingling and numbness, sharp pains or pain insensitivity, motor incoordination, loss of vibration, urination problems,

fainting, and other symptoms. The condition is characterised by peripheral demyelination, decreased nerve conduction, and degeneration of myelinated and demyelinated sensory nerve fibers.[7]

Diabetes directly affects nerves and nerve capillaries, causing diabetic peripheral neuropathy. Chronic hyperglycemia and elevated plasma glucose levels cause metabolic abnormalities and nerve damage by triggering dysfunctional biochemical mechanisms, such as the generation of advanced gyration end products[8], polyol pathway activity[9], and protein kinase C activity.[10] Inflammation[11], impaired insulin signaling[12], mitochondrial reactive oxygen species production, endoplasmic reticulum stress, and dyslipidemia have also been linked to abnormal cellular homeostasis, and diabetes Microvascular pathophysiology causes diabetic peripheral neuropathy in humans. Current study present a case of 64 year old male administered with panchakram.

OBJECTIVE: Investigate the effect of ayurvedic medication on the Diabetic Neuropathy.

AYURVEDIC PERSPECTIVE

According to Ayurveda, diabetes mellitus is very similar to a condition called Madhumeha, which is a subtype of Vataja Prameha. In the condition known as Avarnjanya Madhumeha, vitiated Kapha, Pitta, and Meda all cause Avarana to Vata, which in turn causes an aggravation of Vata and a reduction in the size of the vital Dhatus. It is possible that this will lead to complications with Madhumeha, such as diabetic neuropathy. Both vata and pitta dosha are thought to play a role in diabetic neuropathy, in accordance with Ayurvedic principles. Conventional medications are typically employed for the purpose of providing symptom relief; however, these medicines also have side effects. Patients suffering from diabetic neuropathy may experience numbness, tingling, a burning sensation, and pain. These symptoms can be significantly alleviated by using a variety of single medications as well as Ayurvedic formulations.

MATERIAL AND METHODS

Case Presentation

A 64 years old Male consulted in the Outpatient Department of *Kayachikitsa*, YMT Ayurvedic Medical College-Hospital, Kharghar, Navi Mumbai.

Chief Complaint

- Burning micturition
- Weakness
- Excessive thirst
- Numbness

Patient history

- Allergy: None
- Family history: None
- Physical history: Sleep Disturbed

Examination of Patient

General Physical Examination

- Pulse: 76/min
- BP: 130/90 mmHg
- Weight: 83 Kg
- Stool: Satisfactory
- Urine: 2-3/Day

Ashtavidha pariksha

- *Nadi*: 76 bpm, reg. *Vatapaitik*
- *Mala*: Samyak
- *Jihva- Saam*
- *Shabd* - aspasht
- *Sparsh*- Anushan shit
- *Drika- Prakrut*
- *Akriti*- Stool

Systemic Examination

- CVS – S1/S2, Heard
- CNS – Conscious and well oriented
- RS – AEBE and Clear
- P/A: Soft and Non-tender
- Primary sensations- Touch, Pain, Temp, Vibration-Slight decrease sensation.

- Cortical sensation-Localisation, 3. 2 points discrimination, Stereognosis.

Investigations

RT-PCR for COVID-19 – NEGATIVE

Rapid Antigen Test – NEGATIVE

TREATMENT

Table 1: *Panchakarma procedures.*

Sr. No	Procedure	Duration
1	*Deepana- Pachana (with Trikatuchurna)*	1 to 4th day
2	Snehapana (with Dhanwantara grita)	5 to10th day
3	*Sarvanga abhyanga* (with *Murchit til taila*) followed by *Bhashpa Swedana* (with *Dashmoola kwatha*)	11 to13th day
4	*Virechana karma (with kalyanaka guda)*	14th day
5	*Peyadisamsarjana krama (Shilajatwadi vati TDS)*	15 to 17th day
4	*Shamanaoushadi (Mustadi kwatha 15ml-0-15ml B/F)*	18 to21th day

RESULT AND DISCUSSION

Table 2: Results.

Sl No	Parameter	Before treatment	After shodana	After shamana aushadi
1	Burning sensation	+++	++	+
2	Numbness	+++	+	-
3	Pain in B/L foot	+++	++	-

Samshodhana can remove the obstruction that avarana created in the vata channel. Eliminating kapha and pitta through shodhana reduces the balancing of the morbid doshas in the samprapti, which induces a sense of relief in the patient. In our modern world of fast food, Nidana parivarjana is a difficult task; therefore, in addition to the Shamanaoushadhi's, our bodies require Shodhana to achieve dosh saatmyata. Prior to administering Snehapana, the body must be in a Nirama state, which is attained through Pachana, and Agni Vriddhi, which is attained through Deepana. Trikatuchurna was provided, which is also vyadhi pratyanika. The reason for this is that the qualities of Snehana Dravya require a platform for action. Dhanwantara ghrita is specifically recommended in Prameha and its complications. It is necessary to have a carrier that facilitates the drug's or its pharmacological properties' entrance into the cell. Tikta pradhana dravya affects Pitta, Rakta, and Kapha, whereas ghrita, as a bio-vehicle, successfully reaches the target cell. Sweden adopted the name Ushnajalasnana. In madhumehamahanswed, as are contraindicated because they increase kledatwa. In Virechana karma, harmful (AGEs and Sorbitol) substances are transported from the peripheral tissues to the intestine by employing the correct snehana and swedana.

Therapeutic purgation may have brought unwanted metabolites from the plasma and tissues to the intestine for elimination. Through the elimination of kapha and pitta, vata's path is cleared of obstructions. Virechana karma is the best treatment for pittadosha and pitta samsruatakapha, and it has an effect on pitta sthana. Indirectly regulating the synthesis of excess glucose is a liver function. Even after shodhana, patients need to be given the appropriate santarpana and shamanaoushadis in order to keep this condition, which is a yapya vyadhi, under control. Mustadi kwatha was chosen for the purpose of this study. Musta possesses lekhana, shoshak, and pachaka properties, while Shilajatu possesses the active principle fulvic acid, which significantly increases superoxide dismutase activity. Research conducted in the laboratory has demonstrated that exposure to fulvic acids can slow the onset and progression of diabetes.

CONCLUSION

This case study demonstrates how diabetic neuropathy was successfully treated solely with ayurvedic aushadi, which was the only treatment modality used. Ayurveda can be very helpful in the treatment of diabetic neuropathy with symptoms such as tingling, suptata, and daha. This is despite the fact that there is room for additional research and clinical trials to be conducted. However, it has been substantiated that Ayurveda can be very helpful if a proper clinical diagnosis is performed and the appropriate ayurvedic drug is chosen. This patient took the pure ayurvedic treatment very timely and got complete relief only within 21 days.

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