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Research Article

EFFECT OF AYURVEDIC HERBS IN THE MANAGEMENT OF LOWER LIMB COMPLICATIONS RELATED TO DIABETES NEUROPATHY- A CASE STUDY

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ABSTRACT

In the modern world Diabetes Mellitus is a common health problem. The busy and stressful life of modern era and physical inactivity plays important role in diabetes mellitus. This paper discusses a patient seen in the OPD of *Dravyaguna* department at Dr. S. R. Rajasthan Ayurved University College and hospital Jodhpur. His chief complaints were increasing weakness, burning sensation, pain, numbness and cramps in his lower extremities over the past 3 years. Past medical history includes a 7 year history of diabetes mellitus. 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 *doshas* and *dushyas* involved (i.e., *Samprapthi*). This patient was effectively treated by the combination of *haridra*, *ashwagandha* and *majitha*. Among results burning sensation of hands and feet showed 67% relief, 100% relief in tingling sensation, 100% relief in numbness and 50% relief in Pain in lower limbs. All the symptoms showed highly significant results. Hence it can be concluded that *Ashwagandha*, *haridra* and *majitha Churna* is very effective in patients of Diabetic Neuropathy.

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INTRODUCTION

Diabetic neuropathy is an important cause of morbidity and mortality. The clinical impact of diabetes is mainly manifest in the peripheral nervous system. Diabetic neuropathy causes substantial morbidity and increases mortality. It is diagnosed on the basis of symptoms and signs, and after the exclusion of other causes of neuropathy. Depending on the criteria used for diagnosis, it affects between 50 and 90% of patients with diabetes, among them 15–30% will have painful diabetic neuropathy (PDN)[1]. In *samprapti* of *madhumeha* there is *vata* and *kapha* *dosha* *prakopa* along with *dhatu* *kshaya* and *oja* *kshaya*. Symptoms of *madhumeha* includes *mutra* *madhurya* (sweetness of urine), *pipasadhikya*, *kshudhadhikya*, *aalsya* (lassitude), burning sensation, numbness, and tingling sensation [2]. In chronic cases of diabetes mellitus many complications take place like: vascular, renal, ophthalmic, dermatological complications. Neuropathy is one of the commonest complications causing burning sensation, numbness & tingling sensation in hands and feet [3].

Haridra (Turmeric) is known to Ayurveda world to prevent and cure Diabetes Mellitus effectively since ages. The anti-oxidant

and anti-inflammatory agents of curcumin help fight the disease and strengthen the immune system of the body. Due to neuroprotective, antioxidant and anti-stress, adaptogenic properties of *Ashwagandha*, this *Rasayana* drug was selected for the treatment of diabetic neuropathy. It improves your wellness and relieves body ache in diabetic neuropathy. *Manjistha* (*Rubia cordifolia*) has significant antiglycation, antioxidant and antidiabetic activities [4]. Due to neuroprotective, antioxidant and anti-stress, adaptogenic properties, these drugs, were selected for the treatment of diabetic neuropathy.

MATERIAL AND METHOD

History of the presenting illness

A 43 year old female patient with past history of diabetes mellitus was presented in the OPD no.13-*Dravyaguna* department on 21/11/2017 with burning sensation of hand and feet, numbness of hands and feet, tingling sensation, calf tenderness, pain in Lower Limbs since 3 years. The patient was suffering with diabetes mellitus and was on oral hypoglycaemic drugs (*metformin*-500 mg, *glimipride*-1g). During the course of

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the illness he spontaneously felt profound weakness in his right lower limb. Gradually he felt burning sensation in lower limbs and additionally he also developed associated sensory impairment with numbness in the proximal part of lower limb and tingling sensation in the same limb.

Her blood sugar levels at the time of admission were Fasting Blood Sugar -180 mg/dl; Post Prandial Blood Sugar - 240 mg/dl. She was taking treatment of diabetic mellitus from Allopathic hospital. She is working as a housewife. There was no significant past history of any other chronic illness or trauma was present. Family history of diabetes in both mother and father was present.

Family History:- DM in both mother and father was present.

Personal History: No H/o any drug allergy, No history of any type of addiction like smoking, alcohol.

Systemic Examination

Respiratory system: no obvious deformity, with B/L clear chest, no added sound present

CVS system: S1S2 is audible, No murmur

Digestive System: NAD with normal bowel sounds.

Uro-genital System: burning micturation

Investigations

- CBC- No any significant finding.
- Hb-14.6gm%
- HbA1c- 9 %
- RBS- 136 mg/dl with medicine
- HIV, HBsAg, VDRL:- Negative.

Criteria for diagnosis

1. Karpadadaha (burning sensation of hand and feet)
2. Karpadasuptata (numbness of hand and feet)
3. Tingling sensation
4. Pindli ainthan (calf tenderness)
5. Pain in Lower Limb

Scoring and Gradation Pattern

Burning sensation

No burning sensation	0
Occasional burning sensation of palm and sole	1
Intermittent burning sensation throughout body	2
Continuous burning sensation throughout body	3

Tingling sensation

No Tingling sensation	0
Intermittent Tingling sensation in upper and lower extremities	1
Continuous Tingling sensation in upper and lower extremities	2
Continuous Tingling sensation in whole body	3

Numbness

No numbness	0
Numbness occasionally	1
Mild periodic numbness	2
Continuous numbness	3

Pain in Lower Limb

No Pain	0
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Pain in only feet	1
Pain in Leg	2
Pain in leg with difficulty of water	3

S.N.	Symptoms	Scoring		% Relief
		BT	AT	
1.	Burning sensation	3	1	67
2.	Tingling sensation	2	0	100
3.	Numbness	3	0	100
4.	Pain in Lower Limb	2	1	50

Chikitsa (Line of treatment)

Name of drug	Dose	Frequency	Duration
Haridra	1gm	Twice a day	2 months
Ashwagandha	1gm	Twice a day	2 months
Majistha	1gm	Twice a day	2 months

Anupan- Warm water

General instruction

1. Avoid excessive exercise and day sleep.
2. Diabetes mellitus is kapha pradhan rog, so patient should avoid kapha dosha prakopak ahara-vihara i.e. sweet (Madhura), Amla (sour), Lavana (Salty) food.
3. Don't walk for long time.
4. Avoid fats (butter, oil, malai) and fat rich foods.
5. Take medicine regularly in twice a day.
6. Vihara- (lifestyle modification)- Aasanas (Dhanurasana, Paschimottanasana, Bhujangasana, Sarvangasana)
7. Diet recommended to the patient

Cereals - Old rice (*Oriza Sativa*), Barley (*Hordeum vulgare*), Godhuma (wheat).

Pulses - Adhaki (red gram-Cajanus cajan), Kulattha (horse gram), Mudga (green gram).

Vegetables -*Tanduleyaka (Amaranthus spinosus), Methica (Methi- Fenugreek leaves), Karavellaka (Bitter gourd).*

Fruits - *Orange, Watermelon, Apple, Jambu (Syzigium cumini), Kapitha (Feronia limonia)*

Oils -*Atasi (Linum usitatissimum), Sarsapa (Mustard).*

RESULTS AND DISCUSSION



Fig 1 Before treatment 21/11/2017 Fig 2 On Dated: 19/12/2018



Fig 3 After treatment 20/1/2018

During the 2 month course of haridra, ashwagandha and majistha, patient had reported marked improvement. At the end of 2 months, patient had got significant improvement which was 70-80 % according to him; Blood Sugar level of the patient before the treatment was Fasting Blood Sugar -180 mg/dl; Post Prandial blood sugar- 240 mg/dl which was reduced after treatment to Fasting Blood Sugar- 95 mg/dl and Post Prandial-165 mg/dl.

Neuropathy is one of the commonest complications of (*Madhumeha*) Diabetes mellitus. According to Ayurvedic principles, there is involvement of *Vata* and *Pitta Dosh*a in diabetic neuropathy. It causes burning sensation, numbness in hand and feet. Due to neuroprotective role of ashwagandha it is beneficial in relieving symptoms like burning sensation & tingling sensation. *Madhumeha* is variety of *vataj prameha*. In *Madhumeha* there is *Vata prakopa*, *Ashwagandha* also acts as *Vatahara*. Ashwagandha herb helps relieve hypertension, nervous disorders, poor eyesight and weakness due to diabetes [5]. Haridra (Turmeric) is known to Ayurveda world to prevent and cure Diabetes Mellitus effectively since ages. The anti-oxidant and anti-inflammatory agents of curcumin help fight the disease and strengthen the immune system of the body [6]. Manjistha (*Rubia cordifolia*) has significant antiglycation, antioxidant and antidiabetic activities. It is likely to decrease blood glucose level. In addition, it also exerts antioxidant action. It has antipruritic action, increases healing time in wounds, so it is also good for diabetic patients having ulcers or open wounds [7].

During the treatment, patient was kept only on oral medication for a period of two months. Thus, after the two months of treatment, patient had got significant improvement in burning sensation of hands and feet showed 67% relief, 100% relief in tingling sensation, 100% relief in numbness and 50% relief in Pain in lower limbs. Now patient is gradually improving and there is no recurrence of symptoms after the 3 months of follow up.

CONCLUSION

As the number of diabetics is growing in India as well as worldwide, number of patients suffering from neuropathy will also rise. Hence it is high time to improve our treatment plans and help to answer complicated situations such as Diabetic neuropathy. In patients of diabetic neuropathy there was marked reduction of symptoms like burning sensation, tingling sensation, numbness and calf tenderness.

No unwanted effect of therapy was observed during treatment and during follow up period. So it can be concluded that *these herbs* are very effective in management of diabetic neuropathy but to establish this effect further study of longer duration and larger sample is required. It can be stated from the results that Ayurvedic drugs used in present study are effective to revert the diminished perception of sensations like vibration, cold and heat. These drugs are also safe as did not produce any adverse features.

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