



CASE STUDY

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TREATING DIABETIC AMYOTROPHY THROUGH AYURVEDIC MANAGEMENT: A CASE STUDY

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ABSTRACT

Diabetic amyotrophy is characterised by unilateral weakness and wasting of lower limb muscles associated with their sensory impairment. Such conditions are similar to what is known as Ekangavata (~Mononeuropathy) in Ayurveda. Here we report a 54 year male patient suffering from diabetes mellitus since last 5 years and suddenly observed lower limb weakness and numbness on his right side which subsequently led to a limitation in walking. This patient was treated with Madhutailikbasti in Yoga basti schedule along with Ayurvedic oral medications for three months. Patient reported substantial symptomatic improvement during the course of Basti which was thereafter significantly increased during the course of subsequent therapy.

Keywords: Amyotrophy, Diabetes, Ekangavata, Lower extremity neuropathy

INTRODUCTION

Diabetes mellitus is a chronic disease condition which is associated with a wide range of neurological complications. Diabetic amyotrophy is one such entity occurring distinctly with diabetes. The prevalence of this condition is reported to be 0.8 % in general population and 4 % in a diabetes specific population^{1,2}. Diabetic amyotrophy commonly affects elderly diabetic people. Here weakness begins unilaterally but can gradually spread bilaterally³⁻⁶. The weakness is usually most pronounced in the quadriceps group of muscles though it may involve other muscles in the leg, hip and foot³⁻⁵. Affected patients, almost always have sensory symptoms which are most severe in the thigh, back or hip^{4,6}. Pain, dysaesthesiae, paraesthesiae and numbness are commonly experienced sensory symptoms. Symptoms such as cutaneous hyperaesthesiae, hypoaesthesiae and cold paraesthesiae may worsen at night^{4,5}. In Ayurveda, unilateral weakness of the lower limb as in diabetic amyotrophy can be considered as a variant of Ekangvata (~Mono-neuropathy). Unlike, other vatic disorders, Ekangvata which is caused due to diabetes (Diabetic amyotrophy) cannot be treated alone with Vatanashakchikitsa. Because of involvement of Medadhatu (~fat tissue) in the Prameha (~Diabetes), administration of Snehana (~Oleation) and Anuvasana is supposed to aggravate the condition. Thus, in this clinical situation treatment should be directed in such a way, so that it may not aggravate kapha and Medas (~fat) and also reduces Vata or the condition may be treated as the Medasavarittavata. In the context of Medaavarittavata, Charaka has indicated, Amanashak (~toxin reducing) Pramehanashak (~anti diabetic), Vatanashak and

Medonashak Chikitsa. (~fat reducing treatment)⁷. Medonashak Chikitsa includes Rukshaswedana (~Dry fomentation) and Niruha-basti⁸ (~decoction enemas). In this case study, we had given the patient Madhu-tailik type of Niruhabasti^{9,10} which is indicated in the treatment of Prameha (~Diabetes) in Ayurvedic classics¹⁰. Oral medications which were advised to the patients were Chandraprabhavati, Singhnada Guggulu, powder of Guduchi stem and Rasna-erandadikwatha.¹¹ All these oral medications were used for their Vata-Kapha reducing property. Thus it was assumed that the combination of Madhutailikbasti and oral medication (Singhnadaguggulu, Chandraprabhavati, Guduchichurna and Rasna-erandadikwatha) would be helpful in this clinical situation.

Case Report

History of the presenting illness

A 54 year old man with past history of diabetes mellitus was presented in the Kayachikitsa department with loss of pain sensation and restriction of movements of the right lower extremity since one year. The patient was suffering with diabetes mellitus and was on oral hypoglycaemic drugs (Gimer-2 and Reepas-50). During the course of the illness he spontaneously felt profound weakness in his right lower limb. Gradually he became unable to walk and climb up the stairs due to the subsequent wasting of muscles of right lower limb (thigh and buttock). Additionally he also developed associated sensory impairment with numbness in the proximal part of right upper limb and tingling sensation in the distal part of the same limb. The weakness was more pronounced in the quadriceps, though other muscles of the hip, leg and foot

were also involved. With regard to his lower extremity, he had weak flexion of the hip and was unable to extend the knee against gravity. Knee jerk was absent in the right leg and ankle jerk was diminished in the same. His blood sugar levels at the time of admission were Fasting Blood Sugar -190 mg/dl; Post Prandial Blood Sugar - 230 mg/dl. Other investigations, including MRI of lumbosacral spine, were normal. There was no significant past history of any other chronic illness or trauma. No history of any type of addiction was present. Family history of diabetes in both mother and father was present.

Treatment Plan

Treatment was initiated in three phases:

First Phase

First phase of treatment included Ruksha-swedana (~Dry fomentation), Madhutailikbasti in Yoga Basti (~medicated enema for 8 days) format and oral medication including Chandraprabhavati, Singhanada-guggulu, powder of Guduchi stem and Rasnaerandadikwatha (Table 2) for a period of 8 days.

Second Phase

Second phase treatment included Patrapinda Swedana with Panchaguna oil and Narayan oil for a period of 21 days along with oral medication (Chandraprabhavati, Singhanadaguggulu, Guduchichurna and Rasnaerandadikwatha) medication. There was no gap between respective phases of the treatment.

Third Phase

Third phase of treatment included only oral medication (Chandraprabhavati, Singhanadaguggulu, Guduchichurna and Rasnaerandadikwatha) for a period of 2 months.

Preparation of Basti

Saindhalavana (~Rock salt) and Madhu (~Honey) were mixed properly. While mixing oil was poured slowly, subsequently the paste of Prakshepadavyaswas added and mixed well. Lastly the decoction was added slowly and mixed properly. Basti was prepared in the Panchakarma department of the hospital and was given in the Yoga basti format for a period of 8 days. All the oral drugs were provided procured from the in-house pharmacy of the concerned hospital. (Table 1)

OBSERVATION AND DISCUSSION

During the eight day course of Madhu-tailikabasti, patient had reported 40-50 % improvement. He started walking and climbing up stairs with support. During the course of Basti (~Medicated enemas) patient had also started feeling pain sensation which was absent before treatment, thus showing sensory improvement. At the end of 3 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 -190 mg/dl; Post Prandial blood sugar- 230 mg/dl which was reduced after treatment to Fasting Blood Sugar- 95 mg/dl and Post Prandial- 165 mg/dl. The treatment regime was planned in three phases. In the initial phase of the management patient was given Madhu-tailikabasti for eight days along with oral medication. Main ingredients of Madhu-tailikabasti are Madhu and Dashmoolataila. Madhu is kapha- nashak and all the herbs included in Dashmoola Taila are having Vata-Kaphashamaka properties, and it can be assumed that Dashmoola oil may have Vata-kaphashamak properties. Thus Dashmoolataila and Madhu were effective in breaking the Avarana (~shield) of Medas (Fat tissue) without aggravating the Vata (Table 1). During the treatment with Madhu-tailik basti patient had started walking with support, climbing up stairs and also started feeling pain sensation in the right lateral thigh. Initially pain was bearable, but as the treatment progressed patient was complaining of excruciating pain which aggravates in the night, thus denoting that the pain sensation which was not felt by the patient initially due to the Medasavarana (~Shield of fat) was coming back and thus signifies the breakdown of the Avarana. Oral medication which was given to the patient was Chandraprabhavati and Guduchichurna and Singnada Guggulu and Rasna-erandadikashaya. Chandraprabhavati was described in the chapter of Prameha Chikitsa (Treatment of Diabetes)¹². The main ingredients of Chandraprabhavati are purified Guggulu, cow's urine, Triphala, iron, Vacha (*Acorus calamus*), Mushta (*Cyperus rotundus*), Kalmegh (*Andrographis paniculata*), Devadaru, Turmeric, etc. Thus Chandraprabhavati may act as Vata-kaphanashak (Table 2). According to Bhavprakasha, Guduchi is Rasayani, Amanashak (~toxin reducing), Pramehahar (~anti diabetic). Thus Guduchi not only act as Pramehahar but also pacifies Vata due to its Madhur rasa Ushnavirya and Rasayan properties¹³. Rasna-erandadi kashaya contains leaf of Rasna (*Pluchea lanceolata* C.B Clarke), root of Eranda (*Ricinus communis* Linn.), root of Bala (*Sida cordifolia* Linn.), Sahachara (*Barleria prionitis* Linn), root of Vari (*Asparagus racemosus* Willd), Dusparsha (*Tragia involucrate*), Vasa (*Adhatoda vasica* Nees.), stem of Amruta (*Tinospora cordifolia* Willd. Mier.), stem bark of Dehahva (*Cedrus deodara* Roxb. Loud.), root of Ativisha (*Aconitum heterophyllum* Wall), tuber of Ghana (*Cyperus rotundus* Linn), Ikshura (*Asteracantha longifolia* Nees.), tuber of Shati (*Hedychium spicatum* Hamitt ex Smith), rhizome of Vishwa (*Zingiber officinalis* Rose). Rasna-erandadi kashaya is Vatahar, Amahar (~pacifies toxins) and commonly used in vatic disorders. Thus not only pacifies Vata but also effective in reducing the Medas. Once the patient had started feeling the pain sensation in the thigh which was initially numb, Rukshaswedana (~hot fomentation) was stopped and Snehan (~oleation) therapy with hot fomentation was advised to the patient for a period of 21 days. The second phase of treatment includes Abhyang (~massage) with Panchguna and Mahanarayan oil along with Patrapindapottali. Swedan (~hot fomentation) was given to the patient for the period of 21 days along with oral medication. Thus, phase II includes Vatanashak

management. After the Snehan (~oleation) therapy, patient showed improvement in his excruciating pain in right limb and also continue improvement in the power of right thigh. In third phase of treatment patient was kept only on oral medication for a period of two months. Thus, after the three months of treatment, patient had got

significant improvement in his gait, which was about 70-80 % according to the patient and also his pain sensation was also significantly reduced. Now patient is gradually improving and there is no recurrence of symptoms after the 8 months of follow up.

Table 1: Preparation of Madhutailika Basti

Ingredients	Quantity
Madhu	100 ml
Dashamula Taila	100 ml
Rasna-Eranda kwatha	300 ml
Shatpushpa	12 g
Saindhavalavana	6 g
Madanphala	6 g

Table 2: Oral drugs, their composition and doses

Name of the Drug Compound	Ingredients	Dose	Frequency	Duration
Chandra prabhavati	Purified Guggulu, cow's urine, Triphala, iron, Vacha (<i>Acorus calamus</i>), Mushta, Kalmegh (<i>Andrographis paniculata</i>), Devadaru, Haridra, etc.	2 tab (250 mg each)	Twice a day	3 months
Singhnadaguggulu	Haritiki, Vibhitaki, Amalaki, Gandhak, Amrita, shodhitaguggulu, Erandtaila	2 tab (250 mg each)	Twice a day	3 months
Guduchi Churna		3 g	Twice a day	3 months
Rasna Erandadi kwatha	leaf of Rasna, root of Eranda, root of Bala, root of Sahachara, root of Vari, Dusparsha (<i>Tragia involucrate</i>), Vasa (<i>Adhatoda vasica</i>), stem of Amruta, stem bark of Dehahva, root of Ativisha, tuber of Ghana, root of Ikshura, tuber of Shati, rhizome of Vishwa.	40 ml	Twice a day	3 months

CONCLUSION

Ekangvata (~Mono neuropathy) caused due to diabetes is the Vatavyadhi which is caused due to Medasavarana. Thus the treatment of this condition should be initially directed to break down the Medasavarana after that Vatashamak treatment should be given. According to the modern system of medicine diabetic amyotrophy is a reversible condition. Similarly, in Ayurveda Avaranajanya Vatavyadhi is a curable condition.

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