



Management of Complication of Diabetes through Panchakarma

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Abstract:

Background: Prevalence of diabetes mellitus (DM) is rapidly rising throughout the globe at an alarming rate, where India leads with largest number of diabetics and became "diabetes capital of the world." As diabetes is a metabolic disorder and chronic in most case, its complications can effectively be minimized through proper selection of Panchkarma Therapy.

Objectives: To highlight the panchkarma procedures in microvascular complications of diabetes.

Methods: Microvascular complications include damage to eyes (retinopathy) leading to blindness, damage to kidneys (nephropathy) leading to renal failure and to nerves (neuropathy) leading to abnormal and decreased sensation. In Diabetic Nephropathy Mild Snehana, Swedan & Basti helps to improve function of nephrons of kidney. Abhyanga and Netra Tarpana helps to reduce inflammation which helps to improve the vision and also helps to reduce the dryness of eyes thus useful in Diabetic Retinopathy. Diabetic Neuropathy can be treated by pada abhyang and Takradhara swedan.

Results: If Panchakarma Therapies judiciously administered can prevent onset of complications in most cases & preventing the worsening of complications.

Conclusion: Panchkarma therapies may improve quality of life and solve Complication of Diabetes.

Keywords: Snehana, Swedan, Basti, Padabhyang.

1. INTRODUCTION

Diabetes Mellitus is a chronic progressive metabolic disorder that affects majority of population. Prevalence of diabetes mellitus (DM) is rapidly rising throughout the globe at an alarming rate, where India leads with largest number of diabetics and became "diabetes capital of the world."

Type 2 Diabetes Mellitus is one such type of Diabetes Mellitus which possess major risk factor for various other diseases. Ayurvedic literatures vividly describe about the prognosis, complications and management of Diabetes Mellitus. Ayurveda, considers diabetes as a metabolic kapha type of disorder, in which decline in activity of agni (transforming element) can cause increase in blood sugar. Chronic stage of Diabetes may cause damage of tiny vessels also known as Microvascular complication. Microvascular complications include damage to eyes (retinopathy) leading to blindness, damage to kidneys (nephropathy) leading to renal failure and to nerves (neuropathy) leading to abnormal and decreased sensation.

Diabetic Retinopathy is most common and serious complication of Diabetes and changes in the retina are observed by 10 years of Diabetes history or even earlier due to modified lifestyle in present era.

The risk of development of blindness in diabetics increases by 20-25 times as compared to the normal population. High prevalence rate of Diabetic Retinopathy (34.6%), proliferative diabetic retinopathy (7%), diabetic macular edema (6.8%), and Vision threatening Diabetic retinopathy (10.2%) in diabetics was great concerns which led to search and analyze the disease process on the basis of modern pathogenesis and different Timirvyadhi mentioned in Ayurvedic authoritative texts.

The second most common long-term complication of diabetes is neuropathies affecting up to 50% of patients.^{1,2} Long-standing peripheral neuropathic pain associated with peripheral neuropathy occurs in one of six diabetic subjects.³ With long standing diabetes mellitus progressive damage to nerves is seen. The most common form of neuropathy is distal symmetrical sensory motor polyneuropathy. Early distal sensory motor neuropathy is usually asymptomatic, but sensory abnormalities may be detectable by neuro-physiological testing. Symptomatic distal sensory-motor neuropathy is manifested by sensory loss, and may be accompanied by paraesthesiae and/or pain. Peripheral neuropathy may be asymptomatic. When symptoms are present, they may be negative or positive. Negative symptoms include loss of sensation and loss of strength, while positive symptoms include pricking or pain.⁴ One of the most distressing symptoms that people can suffer from is neuropathic pain and paraesthesia.⁵

Diabetic polyneuropathy is a sequel to Madhumeha which occurs due to further vitiation of the Doshas or due to Vyadhi karshana. The disease diabetic polyneuropathy is not directly mentioned in Ayurvedic texts. But the lakshanas of diabetic polyneuropathy i.e. burning sensation, tingling sensation, numbness etc. are explained under purvaroop and upadrava of Prameha. When Prameha is neglected or ill-treated it will lead to Madhumeha by dhatukshayajanya Vata prakopa as a Paratantra Vyapad.

Diabetic nephropathy (DN) is also a microvascular complication of diabetes mellitus. As the disease DN manifests secondary to Madhumeha, the disease is termed as Madhumeha Janya Upadrava. The diagnosis of DN is microalbuminuria is a powerful screening tool in screening DN earlier stages. A diabetic can develop nondiabetic renal disease like anyone, but the finding of diabetic retinopathy strongly suggests that any proteinuria is due to diabetic glomerulosclerosis.

There is no specific treatment available at present in contemporary science. The optimal therapy for this is prevention. All these above said micro vascular complications are managed by different procedures of Panchakarma,

2. MATERIAL AND METHODS

2.1. Diabetic Retinopathy

Ayurveda procedures (Kriyakalpa) like Nethradhara, Netra Tarpan and many others which are potent enough to provide strength in blood vessels of retina so that there will not be any further hemorrhage. Netra Tarpana is a procedure wherein lukewarm medicated ghee is made to stay stagnant in the eyes for a speculated time in a specific formed frame. The therapy is quite beneficial for the relaxation of eyes and the treatment of various ailments related to eyes. For these procedures to be done, patient has to be hospitalized for a duration of 2 weeks under the supervision of an Ayurveda eye specialist or can be done on OPD bases.

Tarpana with Mahatriphala ghrita⁶ can be given.

2.2. Diabetic Polyneuropathy

Daha (burning sensation), suptata (numbness), harsha (tingling sensation), shosha (wasting), dourbalya (weakness), anga sada (lethargy) are the symptoms attributed as the upadrava of Madhumeha are almost similar to the description of Diabetic Peripheral Neuropathy. DPN is a vatapradhana tridoshaja vyadhi and also it is a dhatukshayja (due to diminished dhatus) stage of madhumeha. To manage this condition Takradhara is a type of the Shirodhara procedure, in this medicated Takra (butter milk) is used, which acts by normalising aggravated doshas, also which acts as rasayana (rejunimator).

2.3. Method of Preparation of Amalaki Kwatha

120 g (3 pala) of kwatha churna of amalaki (coarse powder of *Embilica officinalis*) was boiled in 5 litres (10 kudava) of water till it reduced to 1 litre (2 kudava). Then it was filtered and collected in a stainless steel vessel. This 1 litre (2 kudava) of kwatha was used along with the Takra (butter milk).⁷

2.4. Method of Preparation of Takra

1500 ml (2 Prastha) of milk diluted with 6000 ml (8 Prastha) of water, boiled and reduced to original quantity of milk i.e. 1500 ml (2 prastha). It was allowed to cool on its own. After cooling, little quantity of curd was added and kept overnight to get fermented. Next day morning fermented curd

was churned well, upper cream part is removed. At this stage, takra was ready to use. This Takra was added to amalaki Kwatha (decoction).⁸

Dhara is done in the early morning for 45 -60 minutes daily for 2 weeks. Shirodhara is done 4 inches height from forehead.

Paadabhyang is done by Til tail for 20 minutes.

2.5. Diabetic Nephropathy (DN)

Mild Snehan, Swedan and Basti is useful in this condition. Mild Snehan with Til tail, Swedan with Dashmool kadha and following different Basti has been described –

Acc to Charaka, • Pippaliyadi basti , Rasnadi niruha basti⁹, Patolanimbadi basti¹⁰. Acc to Sushruta¹¹• Surasadigana dravya basti Nyagrodhadigana dravya basti . Acc to Vagbhata¹², • Madhutailika basti • Rajayapana basti.

3. DISCUSSION

The first line of treatment in diabetic complication is the management of diabetes itself. In case of Diabetic polyneuropathy, Vata dosha is invariably involved as Madhumeha as it is of Vataja variety and the degeneration of nerves occurs due to Vata kopa. The morbid increase in the Dhatus prior to Medas and the resultant lack of poshana of uttara dhatus i.e, Asthi, Majja and Shukra causes various complications in Madhumeha. Diabetic polyneuropathy is nothing but a manifestation of majja dushti causing demyelination of nerve fibers due to microvasculopathy and hyperglycemic insult to nerves. Paadabhyang, Takradhara & even Basti procedures will help to reduce the neuropathy caused by diabetes.

In Diabetic Retinopathy affect the eyes resulting in poor vision or even blindness. Ayurveda treatment principles can help to arrest the progression of the disease. There are two stages of retinopathy: Non Proliferative or Proliferative.

Non Proliferative diabetic retinopathy develops first. Blood vessels in the eye become larger in certain spots (called micro aneurysms). Blood vessels may also become blocked. There may be small amounts of bleeding (retinal hemorrhages), and fluid may leak into the retina. This can lead to noticeable problems with patient's eyesight.

Proliferative retinopathy is the more advanced and severe form of the disease. New blood vessels start to grow in the eye. These new vessels are fragile and can bleed (hemorrhage). Small scars develop, both on the retina and in other parts of the eye (the vitreous). The end result is vision loss, as well as other problems.

Netra tarpana It is brimhana in nature It nourishes the eyes, improves & strengthens the drishti shakti. It is a very effective, preventive & curative procedure in vataja & pithaja vikaras. Netra Tarpana is contraindicated in Proliferative retinopathy where vessels are in active haemorrhagic condition. Early detection and treatment of retinal disease is the second aspect of management of DR.

Takradhara is also useful in Diabetic Retinopathy. The process of Takradhara might accelerate the function of tarpaka kapha, and may also bring in the specific action as demanded by the disease condition like blockage of channels by kapha which can be taken as micro vascular occlusion which is the basic pathological process seen in Diabetic Retinopathy. It also helps in the proper nourishment of retina, thereby preventing further vascular leakage and the chakshusya property of drugs helps in the improvement of vision.

Diabetic nephropathy (DN) is a microvascular complication of diabetes mellitus. As the disease DN manifests secondary to Madhumeha, the disease is termed as Madhumeha Janya Upadrava. In Ayurveda, direct nomenclature of DN is not found. Regarding the manifestation of Upadrava (~complications) in Madhumeha patients its stated as, the Dushita Medas (improperly formed fat tissue) along with Kapha, does Dooshana of Kleda and gets transformed to Mootra (~urine). This cause obstruction at the Mootravaha Srotas and transforms Madhumeha into incurable form leading to manifestations of Upadrava.¹³The involvement of Mootravaha Srotas in Madhumeha Samprapti exists from the very beginning of its pathogenesis. *Basti* Marmabhighata can be a sequel due to the Ksharana (passage) of Uttarottara *Dushya*¹⁴ in the urine. Ayurveda has identified the organ system "Basti" as the Moola of Mootravaha Srotas, and it's an organ, which interpolates the whole of the urinary system.

Different types of Basti has been described in our granthas, one such Basti is Pippalyadi Basti (charak siddhi sthan 10/24) indicated in kaphaj predominant disorders.

Ingredients of Pippalyadi Basti have Deepana(stomachic), Pachana (digestive), Shothahara (reduces swelling), Bastishodhaka(clears renal pathway) and Kaphahara (removes the adherent dosas causing obstruction in renal vasculature) actions. Thus, it helps to remove the obstruction at glomerulus and also peripheral circulatory vessels. Thus by cleansing and activating the micro-circulatory channels, circulation and tissue perfusion will be increased thereby providing sufficient nutrition to the tissues.

4. CONCLUSION

Acharya Charaka has emphasized on Rogam Aado Parikshyeta that implies on thorough examination of a patient before planning treatment regimen.¹⁵ He has also given importance to personalized therapy under Purusham Purusham Vikshya,¹⁶ which highlights that the mode of treatment varies from individual to individual. Hence, it is important to treat the complication according to symptoms. If Panchakarma Therapies judiciously & timely administered, can prevent onset of complications in most cases & preventing the worsening of complications.

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