

AYURVEDIC MANAGEMENT OF MADHUMEHA W.S.R. TO DIABETES MELLITUS (TYPE 2)

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ABSTRACT

Millions of people in developing countries are adopting westernized life style and are being affected by Diabetes Mellitus. It is a chronic medical condition associated abnormally high levels of sugar and can last a life time. It is an endocrinological and/or metabolic disorder. This review is an update on unknown complications, causes, treatment, modalities of this disease. This article also provides a summary on disease management through various strategies.

KEYWORDS: Diabetes mellitus, high level of sugar, metabolic, endocrinological.

INTRODUCTION

Diabetes Mellitus is a medical condition characterized by an elevation of blood glucose levels, this metabolic disorder will taken place as a result of either insulin resistance and/or insulin deficiency. This medical condition consider as one of the most predominant type of diabetes since it represent 90% of diabetic cases.

Moreover, this medical condition required a chronic monitoring and treatment throughout patient life, the treatment will involve several aspects like self care measures, life style changes (dietary modification) and in some cases medications. It has been observed during the past 50 years, the rate of incidence of this type of diabetes has markedly increased in parallel with obesity.

Classification of diabetes mellitus is based on its aetiology and clinical presentation, As such, there are four type of diabetes mellitus.

1. Type 1 diabetes
2. Type 2 diabetes
3. Gestational diabetes
4. and other specific types(Sicree et al. 2006)

Type 1 Diabetes is said to account for only a minority of the total burden of diabetes in a population although it is the major type of diabetes in younger age groups at majority of well to do countries. The incidence of type 1 diabetes is increasing in both rich and poor countries. Furthermore, a shift towards type 1 diabetes occurring in children at earlier ages is imminent. (Sicree et al., 2006).

85 to 95% of all diabetes in high income countries are type 2 accounting for an even higher dominance in developing countries. It is intimately associated with improper utilization of insulin by target cells and tissues.

According to WHO (1994), this problem has been aggravated by rapid cultural and social dynamics, ageing populations, increasing urbanization, dietary changes reduced physical activity and other unhealthy lifestyle and behavior patterns.

Diabetes mellitus and lesser forms of glucose intolerance, particularly impaired glucose tolerance, can now be found in almost every population in the world and epidemiological evidence suggests that, without effective prevention and control programmes, diabetes will likely continue to increase globally. (WHO, 1994) In 2010, about 285 million people in the age group 20-79 were envisaged to have diabetes worldwide, about 70% of whom live in developing countries. This estimate is expected to increase to about 438 million, by 2030. Further, by 2030, the number of people with IGT is projected to increase to 472 million or 8.4% of the adult population (sicree et al., 2006). The debilitating effect of diabetes mellitus include various organ failures, progressive metabolic complications such as retinopathy, nephropathy and \or neuropathy (Piero, 2006). Diabetic are accompanied by risk of cardiovascular, peripheral vascular and cerebro vascular disease. Several pathogenetic processes are involved in the developing of diabetes, including destruction of pancreatic beta cells that lead to lowered sensitivity of insulin action.(WHO,1999,Votey and Peters, 2004).

Diagnosis of Diabetes

There are several tests used to detect this disease and these tests include the following

-Urine and Blood test:- In the normal cases i.e., healthy person the urine will not contain sugar but within diabetes patients glucose will overflow through the kidneys and as a result of that urine test will show positive result. As a result of that blood test show positive result.

-Glucose tolerance test:- In this test glucose is given and blood samples taken afterward to determine how quickly it is cleared from the blood, In the most commonly performed version of the test, an oral glucose tolerance test (OGTT), A standard dose of glucose is ingested by mouth and blood levels are checked two hours later.

-Hemoglobin A1c test (HbA1c):- HbA1c, is a form of hemoglobin (a blood pigment that carries oxygen) that is bound to glucose. The blood test for HbA1c level is routinely performed in people with type 1 and type 2 diabetes mellitus. Blood HbA1c levels are reflective of how well diabetes is controlled. This reflective of blood glucose levels over the past six to eight weeks and do not reflect daily ups and downs of blood glucose.

Nondiabetes usually falls within the 4.0%-5.6% HbA1c range. The prediabetes usually has the HbA1c levels as 5.7%-6.4%, while those with 6.4% or higher HbA1c levels have diabetes. (American Diabetes Association (ADA) Standards of medical care in diabetes. Diabetes care. 2014;37:S14-80.PubMed).

Clinical tests:- Blood pressure, Eye exam, Foot exam.

Pre diabetic symptoms as explained in Ayurveda

Following symptoms are explained in Ayurveda as prediabetic symptoms.

- Sweating
- Bad body odour
- Obesity
- liking towards sedentary life style
- laziness
- increased sleeping hours
- increased hair and nail growth
- dryness of palate, tongue, throat
- increased thirst

- burning sensation in feet and palms
- Ant creeping sensation in extremities
- Heaviness of chest area.

Ayurvedic management of diabetes mellitus

Basic Aetiopathogenesis:- Excessive generation of free radical sustained affection of manobhitapakara bhavas altered the body defence mechanism, which in terms can understand that treatment like manasa dosahara, counseling, antistress approach, Dipan, Pachan, can check the vicious pathogenesis involved in Madhumeha. There is a direct relation of the mean score of manobhitapakara bhavas, lipid peroxide and fasting blood sugar, both the role of vata and Manas has detected as potent initiator of pathogenesis.

Herbal drugs for diabetes mellitus

These drugs are mentioned in various ayurvedic samhitas and various research work has done on their efficacy.

Plant name	Ayurvedic name	Effect of drug
Boerhavia diffusa	Punarnava	Antioxidant, increase plasma insulin level
Beta vulgaris	Chukkander	Increase glucose tolerance in OGTT
Bombax ceiba	Semal	Hypoglycemic
Butea monosperma	Palasa	antihyperglycemic
Capparis decidua	Karir	Hypoglycemic, antioxidant, hypolipidaemic
Embllica officinalis	Amla	Decreases lipid peroxidation antioxidant
Gymnema sylvestre	Gurmar	Antihyperglycemic effect
Hemidesmus indicus	Anantmool	Anti snake venom activity, anti inflammatory
Hibiscus rosasinesis	Gudhal	Initiates insulin release from pancreatic beta cells
Swertia chirayita	chirata	Stimulates insulin release from islets
Terminalia bellerica	Behada	Antibacterial, Hypoglycemic
Terminelia chebula	Haridra	Antibacterial, Hypoglycemic
Vinca rosea	Sadabahar	Antihyperglycemic
Acacia arabica	Babul	Induces hypoglycemia
Aegle marmelos	Bilva	Reduces blood sugar, urea, serum cholesterol
Allium cepa	Onion	Antioxidant and hypolipidaemic activity
Allium setivum	Garlic	Increases hepatic metabolism
Aloe vera	Aloe	Anti inflammatory and improves wound healing
Azadirachta indica	Neem	Anti hyperglycemic
Eugenia jambolana	Jamun	Anti hyperglycemic
Mangifera indica	Mango	Anti diabetic, hypoglycemic activity due to an intestinal reduction of absorption of glucose
Momordica charantia	Bitter gourd	Anti diabetic
Trigonella foenum	Fenugreek	Antioxidant, improves glucose metabolism
Tinospora cardifolia	Guduchi	Increase glucose tolerance

Panchkarma for Diabetes Mellitus

Panchkarma is Ayurveda's primary purification and detoxification treatment. In Ayurveda Panchkarma procedures like basti and virechana are mentioned in treatment of DM. It is useful to maintain blood sugar levels.

Abhyang and Swedan- In type1 and 2 diabetic patients can get all benefits from the relaxing effects of abhyang therapy. Stress tends to raise blood sugar levels. Abhyang is useful in relieving stress, even for pre diabetic. This helps to improve circulation which further causes increased glucose absorption and amount of insulin required for impaired glucose levels also decreased. Swedan to balance doshas, sweda opens the pore and flushes and cleanses the system through skin and the toxins are excreted through sweat.

Basti- One of the main procedures of Panchkarma, Basti karma concentrates on the elimination of toxins of the body through the rectum.

Virechana- Virechana is medicated purgation therapy which removes toxins from the body that are accumulated in the liver and gallbladder. After ghrhitpan purgative medicines given to the patient orally which help to bring down the doshas. Benefits of virechana help to treat Diabetes.

Pathya Ahaar

Ayurveda has given utmost emphasis for the maintenance of pathya ahar. Ayurveda stated that if one take wholesome diet and activities suitable to all Dhatus, he can never suffer from Madhumeha. It is said that, like bird reaches its nest on the tree, in the same way Prameha reaches the person who eats more, unhygienic and lazy. Quantity and quality of diet should be decided on the basis of Agnibala.

Pathya ahar for diabetes: Grains- Yava (barley), Godhuma (Wheat), Shashtika Shali(rice), Kodrava (grain variety), Uddalaka, Shyamaka, Bajara. Pulses- Chanaka (Bengal gram), Adhaki(toor daal), Mudga (green gram), Kulatha (horse gram).

Vegetables-Methika (fenugreek), Patola(pointed gourd), Karvellaka (bitter gourd), Tenduleyaka(choulayee), Vastukam(bathua), Rasona(garlic), Kadali(raw banana).

Fruits- Jambu, amlaki (goose berry), Kapittha (monkey fruit), Dadima (pome granate).

Oils- Nikumba (Danti), Ingudi, Atasi, Sarshapa (mustard). Flesh (fat free meat; forest animals, birds)- Harina, shashaka(rabbit), bird like Kapota(pigeon), Titira, Lavaka.

Pranayamas & Yoga-asana: Bhastrika- pranayama, Kapalbhathi, Anulom viloma, Bhramari, Surya namaskar, Tadasana, Trikona asana, Pashimottanasana, Bhujangasana, Shavasana.

CONCLUSION

Therefore it is very important point for the open access journals to encourage researcher and clinicians to work hard in order to clarify the main problems associated with diabetes mellitus and the proper treatment used to treat this medical problem.

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