

Ayurveda Management of Diabetes Mellitus-Single Case Study

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Abstract: Diabetes mellitus is the disease afflicting mankind since a very long time. In Ayurveda this disorder is under the section of Prameha. it is mostly correlate with Madumeha and Ikshumeha. Ayurveda texts deeply describes about the etiology, pathogenesis, prognosis, complications and management for this disorder. Diabetes mellitus is mostly relate with gene factors, dietary factors and life style. But the prevalence of this disease was increased day by day, so the case study is an important need of this era. In this study 56 years old patient presented with poor control of diabetes along with Allopathic treatments. Through physical findings and investigations the diagnosis leads to Madhumeha. The study was assessed by subjective criteria and Objective criteria. The treatment plan opted was Ayurveda internal medicine with changing Diet and lifestyle. Our findings conclude that Ayurveda management is most effective when using with pathyaapathya..

Key words-Prameha, Madumeha, Ikshumeha, Pathya-Apathya

I. INTRODUCTION

Ayurveda describes a collection of complex clinical conditions collectively called Prameha with frequent, abnormal micturition, which correlate in many ways with obesity, metabolic syndrome and Diabetes Mellitus. Obesity, metabolic syndrome, and Diabetes Mellitus all have three metabolic disorders in common.

The role of intermediate metabolites is crucial in Prameha's pathogenesis because it is an acquired disease due to incorrect metabolism if nutrients are present. Because of incompletely digested food, Ayurveda Ama refers to toxic digestion and metabolism intermediates.

Diabetes mellitus falls under the category of Prameha in ayurveda. Prameha is a collective term of 20 disorders in which the entire urinary system is involved, characterized by abnormal values of excessive urination.

The treatment of diabetes without adverse side effects remains a major challenge, and Ayurveda can play an important role in it. The far-reaching distinction in Ayurveda's primary and secondary Dosha typing helps the person to fine-tune therapy.

Health according to Ayurveda

Understanding and treating illnesses and understanding what wellbeing in Ayurveda means is important. Health means that the body, mind and soul are in harmony with themselves and

their surroundings. The person is disease-free and comfortable with what he or she is doing (Swastya), that means that the three bio-energies Vata, Pitta and Kapha are in equilibrium, all tissue organs and systems work properly and that the excretion is also trouble-free, the digestive fire is fine. People experience a state of well-being with themselves and the world around them at a mental level. There is harmony at all levels.

The opposite of one or more of the above concepts is unhealthy. The constitution of a person determines how susceptible that person is to illness and which diseases are most susceptible to Vata diseases, Pitta individuals to Pitta diseases and Kapha individuals to kapha diseases in the first instance.

Diet recommended in Diabetes according to the Ayurveda

Type of Diet	Name
Cereals	Old rice (<i>Oriza sativa</i>) Godhuma (wheat) Barley (<i>Hordeumvulgare</i>) Rice which crops within 60 days Kodrava (grain variety- <i>Paspolumscrobiculatum</i>)
Pulses	Adhaki (red gram – <i>Cajamuscajan</i>) Mudga (green gram) Should be taken with bitter and Astringent leafy vegetables. Kulatta (horse gram)
Vegetables	Bitter vegetables (Tiktasakam) Ex : Methica (Methi –Fenugreek leaves) Karavellaka (Bitter gourd) Green Banana, Tanduleyaka (<i>Amaranthusspinosus</i>) Matsyakshi (<i>Alternantherasessilis</i>)
Fruits	Apple, Jambu (<i>Syzigiumcumini</i>) Kapitha (<i>Feronialimonia</i>) Watermelon Orange Amalaki (<i>Embllicaofficinalis</i>)
oils	Sarshapa (Mustard) Nikumbha (Danti – <i>Baliospermummontanum</i>), Ingudi (<i>Balanitisaegyptiaca</i>), Atasi (<i>Linumusatissimum</i>),

Distruption of the Doshas at Prameha

Three groups of Prameha, namely Kaphaja Prameha, PittajaPrameha and Vatajaprameha, are differentiated as a result of the particular Dosha that is disrupted. In Ayurveda, there are 10 Kaphaja Prameha, 06 PittajaPrameha, and 04 Vatajaprameha. Depending on the stage at which the disruption occurs, Prameha is allocated to the various Doshas. Kapha, in the very first phase, is out of balance. If Kapha raises other Doshas suffer immediately.

That results to increase fat content and it may lead to edema formation in the body. At this stage ,we speak of Kaphaja Prameha. The first step to disruption has begun. If no steps are taken to address the cause of the interruption. Kapha weakens and Pitta increases .Pitta is the second Dosha that influences the course of the imbalance in the body. Pitta increases and causes a disturbance in the blood. This stage is called Pittaja Prameha. If nothing is done about the cause,the situation continues to deteriorate. Pitta is decreasing, and Vata is going to increase. Due to the pressure of Vata ,vital substances end up in the blood and are excreted in the urine. The situation is now rapidly deteriorating, and immediate action is required. The increase of Vata is the stage of Vataja Prameha.

Therapeutic modalities & Advocacy for Diabetes

Principles	Advocacy
1.Nidana Parivarjana – Avoidance of etiological factors	Faulty life style, faulty dietary habits, Mental stress, day sleep & awakening in night
2. Ahara –Diet	Katu (spicy), Tiktha (bitter), Kashaya rasa (astringent), Ushna (hot), Laghu (light), Ruksha (dry)
3.Vihara –Life style modification	Aasanas (Yoga), exercises
4. Aushadi – medical management	Katu (spicy), Tikta(bitter), Kashaya rasa (Astringent)

Prevalence of Diabetes

Globally, an estimated 422 million adults were living with diabetes in 2014, compared to 108 million in 1980. The global prevalence (age-standardized) of diabetes has nearly doubled since 1980, rising from 4.7% to 8.5% in the adult population. This reflects an increase in associated risk factors such as being overweight or obese. Over the past decade, diabetes prevalence has risen faster in low- and middle-income countries than in high-income countries. Diabetes caused 1.5 million deaths in 2012. Higher-than-optimal blood glucose caused an additional 2.2 million deaths, by increasing the risks of cardiovascular and other diseases. Forty-three percent of these 3.7 million deaths occur before the age of 70 years. The percentage of deaths attributable to high blood glucose or diabetes that occurs prior to age 70 is higher in low- and middle-income countries than in high-income countries. The International Diabetes Federation estimated that there were 382 million people with Diabetes in 2013, a number surpassing its earlier predictions. More than 60% of the

people with Diabetes live in Asia, with almost one-half in China and India combined. According to recent statistics by the International Diabetes Federation(IDF) the prevalence of diabetes among adults in Sri Lanka is 8.5%.At present ,one in 12 adults in the country suffers from Diabetes, which totals to 1.16million.Over the past five years, approximately 1-1.4% of total diabetes patients have lost their lives due to the disease.

Aims & Objectives

To evaluate the efficacy of Ayurvedic medicines and life style modification in the management of Diabetes.

Case Report

A 56 years old female patient admitted on female 5B ward in Provincial Ayurveda Hospital,Pallekale on 6th of October 2020, complains of gradual onset of pain and heaviness in right upper limb and lower limb for 2 months.

She also complains frequent urination and body weakness. There was no history of Polydipsia, Polypepsia,Weight Loss, chest pain, unhealed ulcer ect. She was diagnosed as type 2 diabetes 4 years back. Before admitting to our hospital she had taken Ayurvedic medicines from Madumeha clinic in this Hospital. But her sugar level was not decreased due to ignorance of diet and regiments. To overcome this she decided to admit in hospital.

Apart from this she didn't suffer from other medical conditions like hypertension, Dyslipidemia, Asthma,Thyroid disorders ect.There was no any family history related to this condition.

OPD N0:J/433 , IPD No:1308F

Table 1 : General Examination

General Condition	Weak
Height	150cm
weight	62kg
Skin	Normal
BP	110/60 mmHg
Pulse	69/min
Respiratory rate	17 /min
Temperature	36.3C ⁰
Tongue	not coated
Pallor/Icterus/Cyanosis/Clubbing/E dema /Lymphadenopathy	absent

Table 2 : systemic examination

CNS	well oriented person,conscious
CVS	duel sound (S1,S2)present
RS	B/L,symmetrical, Normal Vesicular Breathing heard, No added sounds heard
GUT	frequent urination,

GIT	soft, no organomegaly
Loco motor system	Numbness & Heaviness in R UL & LL Pain in R UL & LL

Table 3: AshtawidhaPariksha

Nadi	69/min, regular
Jihwa	not coated
Mala	twice per day with Niramalakshana
Mutra	6-7times a day and 3-4 times at night pale yellow in colour, odourless
Shabdha	Normal
Sparsha	Normal
Drik	Normal
Akriti	madyama

Investigation (Before Admission to the ward)

FBS-610mg/dl

HBA1C-13.58

Urine creatinine-46.60mg/dl

Urine Microalbumin – 247.16 mg/L

Urine microalbumin /urine creatinine ratio: 530.39

UFR-albumin 3+,Sugar 4+

Diagnosis: Madhumeha (Type 2 Diabetes)

II. MATERIAL AND METHODS

Parameter of Assessment

1. Subjective assessment
2. Objective assessment

Subjective Criteria

Polyuria

- 3-6 times/day, rarely at night 0
- 6-9 times/day, 0-2 times at night 1
- 1 9-12 times/day, 2-4 times at night

Joint pain

- No pain 0
- Pain in joint, routine movements normal 1
- Pain in joint, slight limitations of movements 2
- Pain in joint, limitations of movements with much reduced activity 3

Body Weakness

- Can do routine exercise/work 0
- Can do moderate exercise with hesitancy 1
- Can do mild exercise only, with difficulty 2
- Cannot do mild exercise too 3

Objective Criteria

FBS

HBA1C

Treatment Plan

Table 4: oral drugs and external treatments

OPD/IP D	Date	Medication	Duration
OPD	07/09/2020	1.Madu Kashaya 4tbsp Bd 2.Nishamalaki choornaya 1tsp Bd 3.thripaladi choornaya 01tsp Bd	For 1 week
OPD	14/09/2020	1.Madu Kashaya 4tbsp Bd 2.Nishamalaki choornaya 1tsp Bd 3.thripaladi choornaya 01tsp Bd	For 1 week
OPD	21/09/2020	1.Madu Kashaya 4tbsp Bd 2.Nishamalaki choornaya 1tsp Bd 3.thripaladi choornaya 01tsp Bd	For 1 week
OPD	03/10/2020	1.Madu Kashaya 4tbsp Bd 2.Nishamalaki choornaya 1tsp Bd 3.thripaladi choornaya 01tsp Bd	For 3 days
IPD	06/10/2020	1.Sudarshana churnaya 01tsp Bd 2.Denibadi kashaya ½ 3.Seetharama pills 02 Bd 4.Chandra kalka 01 tsp 5.Maha dalu anupana ½ cup 6.Nishamalaki churnaya 01 tsp 7.Nisha triphal Kashaya ½ cup 8.Diabecone tablets 02 tds 9.Oil massage to right upper limb and right lower limb with Siddhartha oil 10.Dashamul Nadi sweda to right upper limb and right lower limb	For 2 weeks

Daily Diet –only provided b the Provincial Ayurveda hospital, Pallekale

• *Pathya (Do’s)*

food -steamed vegetables-Cabbage, Carrot, curry leaves , Bittergourd,Cereals,leafyvegetables,guava,Pineapple,promaganete,Amberalla,lime,apple,orange

Regimens – walk 15-20 daily-morning

Have at least 2 hour time duration with dinner and sleep

• *Apathya (Don’ts)*

food– Biscuits ,Bread, Spicy foods,Any starchy foods, sweets,

Regimens-Day time sleep

III. RESULTS

Oral medicine and diet control shows significant reduction in blood glucose levels along with complete relief from

Numbness and pain in right UL and LL with comparison to OPD treatment.

Table 5: Subjective (Signs & Symptoms)

Signs	After 1 week	2week	3 week
Pain (R UL & LL)	2	1	0
Body Weakness	2	1	0
Polyurea	1	0	0

Table 6 : Objective Parameters

Investigations	Before treatment on 05/10/2020	After Treatment 18/10/2020
FBS	610mg/dl	370mg/dl
HBA1C	13.58	12.72

IV. DISCUSSION

Diabetes mellitus is a multisystem disorder associated with several complications. Though this disorder have a genetic influence mainly it also relate with faulty life style. Prevalence of this disorder is increased day by day. Based on this increasing trend, the international Diabetes Federation projects that 592 million individuals will have Diabetes by the year 2035. In Ayurveda this disorder is under the category of Prameha which have 20 types and mostly correlate with Madumeha and Ikshumeha.

In this study, we assessed the Ayurveda management of Diabetes by internal medicine along with pathyaapathya management.

Patient was presented to the Provincial Ayurveda hospital due to poor control of typeII Diabetes mellitus with Allopathic medicine. Prescribed allopathic medicine was not changed throughout this study.

When considering OPD management, RBS level was not reduced up to normal references. Although she perceive same internal medicine in whole OPD period, the RBS varied from 474mgdl⁻¹ to 516 mgdl⁻¹. When comparing FBS, it was varied from 510mgdl⁻¹ to 610mgdl⁻¹. In this time period she also had heaviness and pain in right upper limb and right lower limb. Then she was decided to admit the Povicial Ayurveda hospital Pallekale. She was perceived above mentioned internal & external medicine from there and also she was followed the regimens which were advised by the doctor. When comparing

the FBSit is reduced up to 370 mgdl⁻¹ from hospital management. HBA1c was varied from 13.58 to 12.72 in order to the hospital management.

The oral medicines used in this study possesses Mehahara karma and it is indicated in Prameha. When comparing subjective criteria pain, body weakness and polyuria symptoms get revealed after hospital admission. 610mgdl⁻¹ of FBS level refers as the Range of diabetic coma, this study also proved that Ayurveda management can handle this type of critical cases.

According to this study internal medicines and Pathya Apathya management (life style modification) is effective in Diabetes mellitus management in Ayurveda.

V. CONCLUSION

According to this study, it can be concluded that Ayurveda management is most effective when using with pathya-apthya.. Also it was revealed that Ayurveda medical system can handle kind of severe Diabetic cases.

So here is an open field for future research scholars to study the efficacy of Ayurveda management for several types of Diabetic cases.

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