



## Review Article

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### UNDER STANDING DIABESITY OR STHOOLA PRAMEHA AS A LIFESTYLE DISORDER

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Received on: 27/05/15 Revised on: 25/06/15 Accepted on: 02/07/15

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DOI: 10.7897/2277-4343.065108

#### ABSTRACT

Ayurveda is the science which upholds the benefits of healthy living. The life science also explains the Pathya-apathya or Hita-ahita for disease free living. To explore the good things explained in Ayurveda different scholars gave their own contributions and descriptions. Prameha can be understood as both a life style disorder and also as a hereditary disease. The details of Prameha were given in all texts related with Ayurveda. Prameha patient is classified as Krusha and Sthoola in relation with better management of the disease. The term Diabetesity is coined later by the contemporary science for Sthoola Pramehi which is already explained in Ayurveda. Diabetesity is a syndrome with Obesity, Type2 Diabetes mellitus, Hypertension etc. Type 2 Diabetes mellitus is one of the top ten leading causes of death. In future years the count world's population with Diabetes mellitus may be 30 million. The changed life style and diet if continued eventually manifests Diabetes mellitus. A defect in the insulin secretion will ultimately cause metabolic disturbances which finally results in bad utilisation of glucose and effect in fat production and thus Obesity. The presentation tries to highlight the ill effects of Sthoola Pramehi as patient with Diabetesity and explain the possible regimens which can be followed.

**Key words:** Ayurveda, Pathya-apathya, Sthoola Pramehi, Diabetesity, Type 2 Diabetes mellitus

#### INTRODUCTION

Ayurveda is the science that upholds the benefits of healthy living. Ayurveda also highlights the Pathya-Apathya or Hita-Ahita for disease free living. In future years the count world's population with Diabetes mellitus may be 30 million. The changed life style and diet if continued eventually manifests Diabetes mellitus. A Prameha patient is classified as Krusha and Sthoola for the better management of the disease<sup>1</sup>. The term Diabetesity is coined later by the contemporary science for Sthoola Pramehi.

#### Diabetes Mellitus

A defect in the insulin secretion will ultimately cause metabolic disturbances which finally results in bad utilization of glucose causes Diabetes mellitus. T2DM is one of the top ten leading causes of death. It has been predicted that the disease will affect almost 300 million of the world's population by 2025. According to the NCEP and IDF modified ATP III criteria, more than 50% (50 - 70%). Diabetic patients in India are overweight or obese and their risk is 6 - 9.5%. Obesity and Diet are considered to be the modifiable risk factor of Diabetes. Life style intervention (Medical Nutrition Therapy – MNT and Physical activity are included) is one of the two major strategies ruled out for reducing the occurrence of T2DM. A change in life style, observation of Diabetic diet and avoidance of alcohol and smoking, etc. are a few measures in the management of Diabetes. The measures taken may help in the reduction of HbA1c by 0.5 to 2%. On the

contrary, the state of pre-obesity (over weight) and obesity depends upon both the dietary factor and life style.

#### Classification of DM

Diabetes mellitus is classified as impaired glucose tolerance (IGT) without Diabetes, impaired fasting glucose (IFG) without Diabetes, primary Diabetes mellitus-insulin dependent type 1 (IDDM), non-insulin dependent type 2 (NIDDM), malnutrition related Diabetes mellitus (MRDM), secondary Diabetes mellitus - pancreatic disease, endocrine disease, drug therapy, inherited disorders<sup>2</sup>.

#### Presenting features of DM

The presenting features of Diabetes mellitus are acute – polyuria, polydipsia, weight loss (Type 1), chronic – for Type 2, weight loss, thirst, excess urine volume, genital infection with *Candida albicans*, skin infections with *Staphylococcus aureus*<sup>3</sup>.

#### Management of DM

The management protocol can be explained as control symptoms, to prevent acute metabolic complications of ketoacidosis and hypoglycaemia, to encourage self-reliance and self-care, to prevent or treat complications early and to prevent the increased morbidity and mortality associated with poorly managed Diabetes<sup>4</sup>.

#### Complications of DM

The complications of Diabetes mellitus are metabolic which are ketoacidosis, hypoglycemia, lactic acidosis and non ketotic hyperosmolar coma. The other complications

can be understood as acute infections, e.g. Candidal infections, balanitis or vulvitis, Diabetes eye<sup>5</sup>.

#### **Ayurvedic view of DM**

In Ayurveda Diabetes mellitus can be defined as Prameha or Madhumeha. They are classified as per their relative manifestations of signs and symptoms as Vata - 4, Pitta- 6. Kapha -10. According to the planning for the management of the disease as Sthoola pramehi and Krusha pramehi<sup>6</sup>.

#### **Obesity**

Obesity can be included under nutritional disorders. Obesity is defined as 20% of excess over ideal body weight. The storage of lipids in excess of daily requirements in obesity. The end result of excessive calorie intake is an increase in fat deposition around the internal organs and muscles and subcutaneous sites such as abdomen, buttocks, breasts, thighs, face and upper arms. Such obesity is associated with insulin resistance and glucose intolerance, hyperlipidemia, hypertension and an increased incidence of thrombotic arterial and venous disease and of degenerative joint diseases. The weight reduction towards the norm is associated with improved life expectancy<sup>7</sup>.

#### **Medical Consequences of Obesity**

This can be divided as mechanical and metabolic medical consequences. The mechanical consequences are back pain, osteoarthritis, and stress incontinence, intertrigo, and defective wound healing, varicose veins, venous ulcers, and breathlessness, sleep apnoea, risk during anaesthesia or surgery. The metabolic consequences are insulin resistance, Type 2 Diabetes mellitus, hyperlipidemia, gall stones, hypertension, Coronary Heart Disease, stroke, some cancers and depression<sup>8</sup>.

#### **Diabesity**

Diabesity is the word derived from the diseases Diabetes and Obesity. Diabesity is defined as a group of metabolic disorders characterized by hyperglycemia resulting from defects in insulin secretion, insulin action or both (defined by American Diabetes Association in 1997 and accepted by WHO). Diabesity is a condition in which there is an excessive amount of body fat. Diabesity is a metabolic syndrome complex comprising T2DM/IGT and central obesity (waist circumference > 90 cm in males and > 80 cm in females) – HTN, systemic inflammation and pre-thrombotic state.

Ayurveda explains the condition obesity as 'Sthoola' - a condition of excessive deposition of fat muscle in buttocks and breasts, development of different body parts unequally and lack of enthusiasm<sup>9</sup>. The role of life style and diet in Diabetes and Obesity in controlling the diseases are relevant in present era. Acharya Charaka and Acharya Sushruta had recommended certain food items for Obese Diabetic patients (Sthoola Pramehi). These food regimes help in enhancing the effect of Agni and to reducing the effect of Meda and Kleda. The contemporary medical science uses the principle of low calorific value and low Glycemic index for diet application. Ayurveda prescribes Ahara Dravyas with Katu, Tikta and Kashaaya in Rasa; Laghu, Rooksha and Teekshna in Guna; Ushna in Veerya and Katu in Vipaka<sup>10</sup>. Charaka Samhita explains if a person

consumes such food and uses the regimen for maintaining the equilibrium or homogenous state of the Dhatus, he will never suffer from Prameha, excluding Jaata Prameha.

#### **Diet for obese diabetes**

The diet can be planned considering the following - control of blood parameters, reduction of calorific value, maintaining the normal blood glucose, maintaining normal lipid level, improving the overall nutrition, preventing and lagging the complication<sup>11</sup> and reducing the daily intake of calories by 500 to 600.

#### **Properties of diet for obese diabetes**

As per Ayurveda the diet should include Apatarpaniya Dravya, Rooksha Dravya, Ushna Veerya Dravya, Ahara(food) which mitigates the Vata, Sleshma and Meda, Katu, Tikta and Kashaya in Rasa Dravya, Katu Vipaka Dravya and Jangala Mamsa.<sup>12</sup>

#### **Selection of Ahara Vargas**

The food for Obese Diabetes should include Shookadhanya varga – cereals, Shameedhanya varga – pulses, Shaka varga – vegetables, Sneha varga – oils, Phala varga – fruits, Paniya varga – liquids, Mootra varga and Madya varga Dravyas.<sup>13</sup>

#### **Factors to prevent life style disorders**

The conditions like Diabetes and Obesity, the latest disorder of combination of these as Diabesity are life style disorders. The factors related with life style disorders are balanced and balancing Ahara and Vihara, Ahara Vidhi Visheshayatanam – 8 [Cha. Vi. 1], Ahara Vidhi Vidhaanam [Cha. Vi. 1], Matravat Bhunjeeta [Cha.Soo.5], Tanmanaa Bhunjeeta [Cha.Vi.1], Aatmanam abhisameekshya [Cha. Vi. 1] and life style – Dinacharya (daily routine), early to bed and early to rise (Brahma Muhoorte uttishtet), Vyayama (exercise), Ritucharya (seasonal codes of living), Sadvrutta (social codes and hygiene), Achara Rasayana, Rasayana, Vajeekarana and practice of Yoga as Asanas and Pranayama.

#### **CONCLUSION**

The conditions like Diabetes, Obesity and Diabesity are life style disorders. To prevent these disorders a proper diet should be planned considering in mind the condition of the individual. The role of life style and diet in Diabetes and Obesity in controlling the diseases are relevant in present era. Those food regimes help in enhancing the effect of Agni (power of digestion) need to be selected. The contemporary medical science uses the principle of low calorific value and low glycemic index for diet application. The complications of Diabetes mellitus cannot control in chronic stage of the disease. The inclusion of Obesity also causes reduced nutritional status that produces fatigue in the body and imbalance between body systems. So better care should be taken for the control and management of the disorder. The prevalence of life style disorders like Diabesity due to unawareness and neglect of genuine food habits and lack of physical exercise. Many Ahara Dravyas mentioned in Ayurveda are still available in India which can be included in our present day diet. Some diseases like

Diabetes and Obesity are more prone to develop due to bad adoption of life style and diet. So some other ill health conditions and Diabetes can be prevented with the adoption of proper diet and regimen. Recent researches shows low calorific value and low glycemic index mentioned in our Samhitas for Sthoola Pramehi like Bilwa, Yava, Karavellaka, Methi, Jeeraka and Shunti, etc.

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#### Cite this article as:

Abdul Sukkur M, Shrikanth P H. Under standing diabetes or sthoola prameha as a lifestyle disorder. Int. J. Res. Ayurveda Pharm. 2015;6(5):580-582 <http://dx.doi.org/10.7897/2277-4343.065108>

Source of support: Nil, Conflict of interest: None Declared

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