EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 11
Issue: 1
105-108
Year: 2024

KAYACHIKITSA AN APPROACH FOR THE MANAGEMENT OF METABOLIC DISORDERS IN AYURVEDA

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Article Received on 09/11/2023 **Article Revised on 29/11/2023** **Article Accepted on 19/12/2023**

ABSTRACT
Ayurveda is the ancient science of health and well being encompasses different branches for specific purposes; Kayachikitsa is one of the branches of Ayurveda science that mainly deals with management of general diseases using Ayurvedic procedures and Ayurvedic formulations. Kayachikitsa involves complete treatment (Chikitsa) of body (Kaya) using different approaches. The principles and approaches of Kayachikitsa helps to treat diseases such as; fever, infections, anemia, gastric trouble, diabetes, arthritis and various metabolic disorders, etc. The prevalence of metabolic disorders increases day by day due to the frightful conduct of daily regimen. Considering the frequency of metabolic diseases and therapeutic advantages of Kayachikitsa present article summarizes role of Ayurveda in the management of metabolic disorders mainly related with disturbed pattern of life style.

KEYWORDS: Ayurveda, Kayachikitsa, Metabolic Disorders, Metabolism.

INTRODUCTION

Kayachikitsa is important stream of Ayurveda that relates with the common illness and their management using natural drugs. The use of herbs, Ayurveda formulation and Shodhana therapy, etc. can be utilized as approaches of Kayachikitsa for the management of different diseases including; Sosha, Jwar, Unmad, Apasmara, Atisara, Kustha and Prameha etc. Kayachikitsa provides all aspects related to the diagnosis and treatment of diseases. It encompasses knowledge about dispensing, dose and duration of medicine. The principles of Kayachikitsa correct Agni, Dosha, Dhatu and detoxify body thus help to cure general diseases. The rejuvenation therapy (Rasayana) of Kayachikitsa also restores physical and mental health status. The basic principles of Kayachikitsa provide ways for the management of diseases related to the disturbed pattern of life style i.e. metabolic disorders. The Kayachikitsa helps to manage various metabolic disorders including; obesity, hypertension, high cholesterol, fatty liver, diabetes and digestive problems. These diseases mainly occurs due to the disturbed pattern of daily regimen such as; irregular diet, physical exertion, stress, disturbed sleeping patterns, bad dietary habits, anger and lack of exercise, etc.

A metabolic disorder is a disorder that negatively alters the body's processing and distribution of macronutrients such as proteins, fats, and carbohydrates. Metabolic disorders can happen when abnormal chemical reactions in the body alter the normal metabolic process. This could affect how well the body can break down large molecules for energy, how efficiently cells can produce energy or cause problems with energy regulation.

Metabolism

Metabolism refers to the ongoing biochemical processes that maintain the functioning of living organisms. It is the balance of two processes:

Anabolism

A succession of chemical reactions that builds molecules from smaller components; anabolic processes usually require energy.

Anabolism allows the body to grow new cells and maintain all the tissues. Anabolic reactions in the body use simple chemicals and molecules to manufacture many finished products. Examples include the growth and mineralization of bone and increases in muscle mass.

Classic anabolic hormones include

- **Growth hormone** – a hormone made by the pituitary gland that stimulates growth.
- **Insulin** – a hormone made by the pancreas. It regulates the level of sugar glucose in the blood. Cells cannot utilize glucose without insulin.
- **Testosterone** – causes the development of male sex characteristics, such as a deeper voice and facial hair. It also strengthens muscles and bone.

- **Estrogen** – involved in strengthening bone mass, as well as developing female characteristics, such as breasts.

Catabolism

Catabolism breaks things down and releases energy; it uses larger compounds to create smaller compounds, releasing energy in the process. Catabolism provides the energy our bodies need for physical activity, from cellular processes to body movements.

Catabolic reactions in the cells break down polymers (long chains of molecules) into their monomers (single units). For example:

- **Polysaccharides are broken down into monosaccharides** – for instance, starch is broken down into glucose.
- **Nucleic acids are broken down into nucleotides** – nucleic acids, such as those that make up DNA, are broken down to purines, pyrimidines, and pentose sugars. These are involved in the body's energy supply.
- **Proteins are broken down into amino acids** – in some circumstances, protein is broken down into amino acids to make glucose.

When we eat, our body breaks down nutrients – this releases energy, which is stored in molecules of adenosine triphosphate (ATP) in the body. ATP is considered to be "the energy currency of life."

The energy stored in ATP is the fuel for anabolic reactions. Catabolism creates the energy that anabolism consumes for synthesizing hormones, enzymes, sugars, and other substances for cell growth, reproduction, and tissue repair.

Causes

Metabolism is a complex process that involves many biochemicals, tissues, and organs. This means there are many opportunities for something to go wrong and cause a metabolic disorder. Some examples of causes are:

- **Genetics:** Genes can influence metabolic processes in a variety of ways. For example, people with Gaucher's disease have a genetic mutation that limits the production of glucocerebrosidase, an enzyme for breaking down fats. This can cause a harmful buildup of fat around the body.
- **Organ dysfunction:** Organs involved in metabolism can fail to function properly. For example, Diabetes Trusted Source can occur when the pancreas is unable to produce sufficient insulin to regulate blood glucose levels.
- **Mitochondrial dysfunction:** Mitochondria are small parts of cells that primarily produce energy. Mutations of the mitochondria or cell DNA, or environmental triggers, can affect how well mitochondria function and how much energy they can produce.

Common symptoms

Metabolic disorders are diverse and can affect many aspects of bodily functioning. Common symptoms include:

- Tiredness
- Muscle weakness
- Unexpected weight gain or loss
- Changes in skin color
- Stomach pain
- Nausea or vomiting
- Reduced appetite
- Developmental problems in babies and infants

Treatment

Metabolic disorders have a wide range of treatments depending on the cause. Many of these conditions are genetic or currently without a cure. This means that a person could require lifelong medications or need to make lifestyle changes to manage their symptoms.

Ayurved concept of metabolic disorder

Metabolic Disorder is result of improper metabolism. Metabolism can be corelated with functions of Agni in Ayurveda. Various causes of metabolic disorders like, sedentary lifestyle, oily, heavy food, excessive calory consumption and lack of exercise or physical exertion etc. mainly vitiate Agni especially Medadhatvagni which may produce Aam and vitiates Kapha and Meda. Santarpanottha Vyadhi like – Sthaulya, Prameha, So metabolic disorder can be said Santarpana Janya Vyadhi.

In Ayurveda above features have been mentioned as the result of Medavaha Sroto Dusti. So it can be said that, initial stage of metabolic disorder can be compared with Medavaha Sroto Dusti.

In the middle stage metabolic disorder turns in to type 2 diabetes mellitus and caoronary artery diseases. So it can be said as the condition of Sankara Vyadhi.

In later stage of the metabolic disorder, complication of specific diseases like acute pancreatitis, CAD due to hyper triglyceridemia, Diabetic retinopathy, neuropathy, nephropathy etc. due to diabetes mellitus and cerebral hemorrhage, hypertensive cardio-myopathy, hyper tensive retino and nephro pathy due to hypertension. So with the gradual progress of the disease it gets worsened conditions and becomes difficult to treat. So it is wise to treat this disease before it reaches to middle or later stage condition involving Vyadhi Shankar and Upadrva. Acharya Sushruta has mentioned Shadvidha Kriyakala for early diagnosis of disease so that treatment can be planned as early as possible and further progress of disease can be stopeed.

Medavaha Sroto Dusti is the initial stage of metabolic disorder. So the Nidan and Samprapti of Medavaha Srotasa Dusti can be helpful to understand Ayurved aspect of metabolic disorder. For complete understanding

of metabolic disorder as per Ayurved perspective we can divide the condition of metabolic disorder in three stages.

Initial stage of metabolic disorder

Patients having mild increase in waist circumferences, Prediabetes, Prehypertention and Mild dyslipidemia can be diagnosed as initial stage of metabolic disorder. Above condition of initial stage of metabolic disorder can be compared with Medavaha Sroto Dusti Laxana.

Hetu (Causes)

Nidana of medavaha sroto dusti

- Avyayama (Lack of exercise)
- Divasvapna (Daytime sleep)
- Medyanam Ati Bhakshanat (Excessive consumption of fatty and high calory diet)
- Varuni Ati Sevana (Excessive consumption of alcohol)

Linga (Sign and Symptoms)

Symptoms of medavaha sroto dusti include

- Atisthula Laxana and Purvarupa of Prameha.

Atisthula laxana

- Reduced life span and quality of life
- Loss of enthusiasm
- Loss of libido and difficulty in coitus
- Weakness
- Foul smell from body
- Excessive perspiration
- Excessive Appetite
- Excessive thirst

Purvarupa of prameha

- Curling of the hairs
- Sweat tastness of mouth
- Numbness and burning in sole and palm
- Dryness of mouth, palate and throat
- Excessive thirst or increased desire for water
- Laziness
- Accumulation of excretory products in body
- Numbness and burning in body parts
- Attraction of ants toward urine and body
- Turbid or vitiated urine
- Foul body smell
- Excessive sleep

Aushadha (Treatment protocol)

Treatment principle for medavaha sroto dusti

Treatment of Medavaha Sroto Dusti includes same principle of treatment of Sthaulya, like;

Chikitsa sutra

- Kapha- Medahara and Vatanulomaka Anna Pana
- Niruha Basti prepared with Ruksh, Ushna and Tikshana Aushadha
- Udvartana by Ruksha Aushadha

Drugs

- Guduchi
- Bhadramusta
- Triphala
- Takrarista
- Madhu
- Vidangadi Lauha
- Yava+Amalaki Prayoga
- Bilvadi Panchamula kwath with honey
- Agnimanth Svaras
- Shilajatu Prayoga

Pathyapathya

Pathya

- Daily exercise
- Jirne Bhojana (To take food after complete digestion of previous food)
- Maximum use of Yava (Barely) and Purana Godhuma (Old Wheat) for food preparation.

Apathya

Ahara

- High calorie diet, like fast foods
- Fatty, heavy and oily food substances
- Excessive and daily use of meat
- Excessive use of milk/dairy products like curd, paneer, ghee, sweets
- Excessive alcohol consumption

Vihara

- Lack of exercise
- Daytime sleep
- Adhyasana
- Vishamashana

Middle stage of metabolic disorder

It can be compared with Avaranajanya Madhumeha in Ayurveda. Sushruta has mentioned it as Sthula Pramehi.

Hetu (Causes)

- Excessive indulgence of Guru, Snigdha, Amla, Lavana Rasa dominant diet
- Samashana
- Nava Anna and Pana
- Excessive Sleep
- Excessive Seating on very comfortable seats
- Lack of exercise
- Very less mental exercise
- Lack of Samshodhana of vitiated and accumulated Dosha

Linga (Sign and Symptoms)

- Excessive increase of Shleshma and Pitta leads to Avaran of Vata and obstructed Vata excrete Ojas with urine and so urine becomes like Madhu (Honey) in taste and colour which is called Madhumeha.
- Patient feels Ojas Kshaya Laxana due to excessive secration of Ojas with urine. Patient feels either

symptoms of Vata, Pitta or Kapha frequently and ultimetally becomes emaciated.

Treatment

Upakrma

- Langhana
- Rukshana
- Bruhana
- Snehana

In condition of excessive dosha Samshodhana like Vamana and Virechana should be given.

If Dosha are moderately vitiated Vyayama and Pachana drugs can be used.

Rukshana can be done with Udavartana of powder of drugs having Kashaya, Ruksha and Laghu properties.

After complete Shodhana or Samyaka Langhana and Rukshana, Bruhana and Snehana should be performed.

Drugs

- ❖ Phalatrikadi Kwath
- ❖ Nisha Amalaki
- ❖ Ayaskruti
- ❖ Shilajatu rasayan
- ❖ Khadir rasayana
- ❖ Tuvaraka rasayana

Later stage of metabolic disorder

It can be compared with complicated case of Avarana and Madhumeha. If Madhumeha not treated timely and properly, its complication likes carbuncles devolpes in vital parts and muscular area.

Upadrava of avarana

- ❖ Cardiac disease
- ❖ Abscess
- ❖ Splenomegaly
- ❖ Tumour in Maha Srotasa
- ❖ Diarrhea

Treatment

Patient having complications due to Avarana should be treated with Anabhishyandi, Snigdha, Shroto Shodhaka, Vatanulomana and Kapha, Pitta Aviruddha drugs.

Rasyana prayoga

- Shilajatu with milk
- Guggulu
- Lasuna

CONCLUSION

Metabolic disorders affect metabolism of some important organs, which can result in a range of symptoms or complications. They typically occur due to the body producing too much or too little of a substance. Genetic mutations affecting biochemical processes are the cause of many metabolic disorders. It can be concluded by above discussion that metabolic disorder can be compared with Medavaha Srotas Dusti, Apathyanimitaja Prameha and Updrava of Avarana according to its various stages. The treatment of metabolic disorder and preventive measures depends upon the stage of metabolic disorder.

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