

Emerging metabolic disease in females: What *Ayurveda* can offer?

Shweta S. Deshpande*¹, Deepa S.Thamal²

1. M.D (scholar), Samskrit samhita dept.
2. M.D (scholar), Rasshastra bhaishajya kalpana dept.

Y.M.T Ayurvedic college, Kharghar, Navimumbai

*Correspondence address: drshwetadeshpandel@gmail.com

Abstract:

There is a paradigm shift in the disease trend in overall population. The earlier infectious/communicable diseases been replaced by non communicable, metabolic and autoimmune disease. This was a problem of developed countries erstwhile but now India is facing this burden too. World Health Organization (WHO) stated that metabolic syndrome (MS) is contributing significantly to increasing morbidity and mortality. In 2013, prevalence rate of MS was 8% and 18% in Indian male and female respectively. MS is defined as clustering or constellation of health marker. MS includes conditions like Obesity, PCOS, Hypothyroidism, Infertility, Diabetes mellitus, Hypertension, Hypercholesterolemia, Coronary Heart disease, Cancer and etc. of which many

fall under gynecology and obstetrics (GY/OBS) section. Pathology of MS occurs due to cross sectional communication between Insulin resistance and chronic inflammation. The description of *Bahudosha*, *Santarpanajanya vyadhi*, *Medoroga*, and *Santarpanajanyaprameha* in *Ayurvedic* science has similarity to MS. *Ayurvedic* management of these conditions involves predominantly *Aahara* (diet management), *Vihara* (physical exercise and stress management) and *Shodhana* (purification).

After going through various research articles, it is seen that *shodhan chikitsa* proves fruitful in management of metabolic syndrome.

MS is slowly engulfing the world hence prevention or delaying it through life style management and *Shodhana chikitsa* will play important role. This paper will cover

the epidemiological data of MS in female and GY/OBS conditions. An *ayurvedic* review of these conditions along with their management and its application in today's clinical practice will be discussed.

Key words: Metabolic syndrome, *shodhan chikitsa*, Life style management

Introduction:

Urbanization is taking place at a faster rate in India, population residing in urban area in India according to census was 11.4% and this count increased to 31.6% according to 2011 census¹. Improvement in economic situation in the developing countries is prevalence of metabolic diseases in adult and particularly in females; rapid urbanization causes change in food habits, increased stress level and sedentary life style.

Definition of metabolic syndrome:

Life style disorder is defined as a cluster of conditions — increased blood pressure, a high blood sugar level, excess body fat around the waist and abnormal cholesterol levels — that occur together, increasing risk of heart disease, stroke and diabetes. But having just one of these conditions doesn't mean having metabolic

syndrome. However, any of these conditions increase risk of a serious disease².

Pathology of metabolic syndrome and Basic principle for treatment:

Insulin resistance and Inflammation were assumed (postulated) as two pathways that play casual role in metabolic diseases; several evidences showing cross communication between Insulin resistance and Inflammation. Thus targets of all metabolic disease are Insulin resistance and Inflammation³.

Epidemiology of Metabolic syndrome:

Disease trend have been changed now days, previous communicable diseases have been replaced by non-communicable, auto immune, and metabolic disorder in this way is a problem in developed countries, but because of urbanization developing countries like India facing this problem too.

World Health Organization (WHO) stated that metabolic syndrome (MS) is contributing significantly to increasing morbidity and mortality. Metabolic disease imposed large burden on individual and National health system and economy.⁴

Prevalence rate of metabolic disease increasing throughout world,

moreover life style habits and socio economic status appear to influence prevalence across age, sex and race.

In year 1988- 1994 prevalence of metabolic syndrome lower in women than men but later 1999-2011 year showing increased prevalence rate dramatically in women over the time period⁵.

Hence there is need to study metabolic syndrome in women and its solution from ayurveda.

Material and Methods:

Aim : Management of metabolic disorder in women through *ayurveda*

Objectives :

- 1) Finding patho-physiology and treatment of metabolic disorder according to ayurveda
- 2) Explaining role of lifestyle modification in metabolic disorder according to ayurveda.

Type of study: Conceptual study (Literary study)

Material: 1) *Ayurvedic* Treaties
2) Epidemiological data from WHO (world health organization) on metabolic disease.

3) Review articles from *ayurveda* on metabolic syndrome

4) Article related to life style management from *Ayurveda* and contemporary science

Methods:

Literary review from various research articles from ayurveda and contemporary text, previous studies, epidemiological data, updated information available on internet will be critically analyzed, assessed and evaluated as problem selected here.

Result:

According to various ayurvedic scientific articles metabolic syndrome sharing pathology *vis a- viz samprapti* like *prameha, medorog, ama, santarpanjanya vyadhi* ⁶.

According to ayurveda *Ama* is root cause of all metabolic disease and degenerative disease since it blocks strotas or micro- channel that nourishes tissue. *Ama* is believed to have antigenic and pre-inflammatory property.⁷

All metabolic syndromes seen in women are mainly PCOD, obesity, osteoporosis, breast cancer and cervical cancer shows low grade chronic inflammation.

Obesity is nothing but result of excessive food intake with lack of physical

activity. Obesity and medoroga both have the same causes, signs, symptoms and treatment. Obesity can be found in all age groups. This is primarily due to increasing use of mechanized transportation and a greater prevalence of labor saving technologies at home.

The best treatment found to this is limiting food intake and increasing physical work that is nothing *but apatarpana and vyayama* that our acharyas have mentioned as *chikitsa of sthaulya*.⁸

Unhealthy food and life style i.e. *mithya ahar* and *vihar* leads to twenty disorders in women (Chi. 30/8). The *yonivyapads* mentioned here have similar signs like pcos which are caused due to unhealthy food and life style.

Although the exact pathophysiology of PCOS is complex and remains unclear genetic and environmental factors, including unhealthy food, lifestyle, obesity, hypothalamic abnormalities complicate the pathogenic cycle⁹.

Management of PCOS is difficult and involves multispecialty approach. Lifestyle change is the first-line treatment in the management of the majority of PCOS women who are overweight.

Evidence shows that lifestyle change with as little as 5-10% weight loss has significant clinical benefits improving psychological outcomes¹⁰

From the above observations it is clear that metabolic disease mainly arises due to inappropriate dietary habit and sedentary life style.

As we all know Prevention is better than cure, hence to avoid metabolic disease life style modification is a must. In ayurvedic treatises, life style modification is given in terms of *Dincharya* (daily regiments) , *Ritucharya* (seasonal regiments) these two can be elaborated mainly via. two parts that is *Aahar* (Diet management) and *Vihar* (Physical exercise or stress management).

Shodhan chikitsa not only cures the disease but also avoids recurrence of the disease.

In metabolic disease treatment like *shodan chikitsa* is needed which will avoid recurrence, as recurrence rate is more in metabolic disease.

Discussion:

In this urbanization era females are a high risk population with respect metabolic disease; and the number are consistently on rise. There was a

significant increase in prevalence rate in women with respect to age.¹¹ In women metabolic disease pattern is different with different age group. PCOS, obesity, hypothyroidism like condition seen in 16-20 yrs, in age group 30-55yrs mainly seen Diabetes mellitus, Hypertension, Hypercholesterolemia, Coronary Heart disease. After menopause conditions like breast cancer, cervical cancer, osteoporosis can be observed. As metabolic disease pattern is different in different age groups, hence there is need of certain regiments which will act as prophylaxis for further disease enhancement. For this, life style modification and *shodhan chikitsa* will be the best answer.

Insulin resistance and chronic inflammation are two main reasons for metabolic syndrome. Due to this reason chronic inflammation plays a main role in many diseases like PCOS, obesity, osteoporosis, cancer, diabetes mellitus¹².

Chronic inflammation according to ayurveda can be correlated with the condition ama.

Ama is the main root cause of disease, due agnimandya it is responsible for obstruction in micro channels (strotas)

and causes homeostasis, inflammation and tissue damage¹³

In charak sutra sthan symptoms of bahudosha resemble to metabolic syndrome.

And treatment of these aggravated doshas is by langhan (lightning) and pachan (digestion), but these never recur if they subdued with evacuation therapy (panchkarma)¹⁴

As main reason behind metabolic disease is change in life style, hence life style modification is necessary. In ayurveda in the first few chapter dincharya, ritucharya are explained which play significant role in life style modification. Along with *dincharya* and *ritucharya* ayurveda has also mentioned *rajswala parichrya*, *sutika parichrya* to avoid some particular diseases in women.

Dincharya and *Ritucharya* can be coined as physical adaption by human to acclimatize physiological needs of body.

The daily regimen i.e routine to be followed in order to maintain our health is called *dincharya*. All the disorders in current era are mainly because of daily routine not being followed like eating at irregular time, irregular sleeping patterns thus in order to maintain health acharyas

have specifically mentioned the routine that has to be followed.

The seasonal regimen is to be followed to avoid diseases occurring due to seasonal variations. In *rituchrya* specific *samshodhan karma* and specific diet regimens are mentioned to avoid these diseases.

Regimen to be followed in the menstrual time is known as *Rajswala paricharya*. In *Rajswala paricharya* do's and don'ts are mentioned, for example strenuous exercise should avoided in menstrual phase the recent study from Harvard medical school proves that strenuous exercise can cause menstrual disturbance hence to follow *rajswala paricharya* is necessary¹⁴

There are ample of changes occurring in female during *garbhavstha* and *prasvaavstha*. In these conditions women are more prone to vata vitiated disease and hence to avoid further complication and rejuvenation of women health *sutika paricharya* is important¹⁵.

Conclusion:

Different patterns of metabolic syndrome are observed in women with respect different age groups. The best management of this is by management of

aahar (diet management) and *vihar* (exercise, stress management). E.g. To avoid post menopausal osteoporosis *nitya abhynaga* , *vyayam* and *aahar* is necessary.

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