

Syndrome 'X' - Current Global Pandemic with a hope to cure in Ayurveda

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Abstract

There was an era when the mortality rate was high due to the infectious disease in the population. Thanks to Sir Alexander Fleming who led to the discovery of the Antibiotics and gave weapon to fight against the pathogens. There was greater reduction in the mortality rate due to infectious disease after discovery of antibiotics.

But in the latter half of the 20th century newer developments of various disorders called as metabolic disorders and life style disorders were seen in the population. Metabolic disorders which aroused due to imperfect food habits and lack of exercise. Life style disorders, which a human being acquires due to his life style patterns and day to day activities. The metabolic disorders do not occur as single but the person suffers from two or more set of features currently called as *Syndrome X* or metabolic syndrome. Metabolic syndrome is premorbid state that drags the patient into various other disorders, if no proper steps are taken to prevent and manage it.

Ayurveda means the life science which explains about the preventive as well as curative aspects of diseases and way to stay healthy and disease free. The metabolic syndrome – similar set of features has been explained about the Acharyas 1000yrs back not only the aetiology, pathogenesis and complication but also about the preventive and curative measure which is unique, effective and evidenced based till now. In this conceptual study the attraction is drawn to help wider group of population who are prone and presently defined under *Syndrome X* with a great hope of prevention and cure with botanicals and various formulations explained by our Acharyas after extensive research and experimentation.

Keywords Ayurveda, Botanicals, Pandemic, *Syndrome X*



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INTRODUCTION

Metabolic syndrome is a disorder of energy utilization and storage, diagnosed by a co-occurrence of three out of five of the following medical conditions viz., abdominal (central) obesity, elevated blood pressure, elevated fasting plasma glucose, high serum triglycerides, and low high-density cholesterol (HDL) levels. Metabolic syndrome increases the risk of developing cardiovascular disease and diabetes¹. Some studies have shown that prevalence of metabolic syndrome in USA is 34% of the adult population² and the prevalence increases with age.

SYNONYMS

Syndrome x is also known as

- Metabolic syndrome X,
- Cardio metabolic syndrome,
- Insulin resistance syndrome and
- Reaven's syndrome (named for Gerald Reaven).

DIAGNOSIS

The World Health Organization 1999 criteria³ requires the presence of any one out of diabetes mellitus, impaired glucose tolerance, impaired fasting glucose or insulin resistance, AND two of the following:

- Blood pressure: $\geq 140/90$ mmHg

- Dyslipidemia: triglycerides (TG): ≥ 1.695 mmol/L and high-density lipoprotein cholesterol (HDL-C) ≤ 0.9 mmol/L (male), ≤ 1.0 mmol/L (female)
- Central obesity: waist: hip ratio > 0.90 (male); > 0.85 (female), or body mass index > 30 kg/m²
- Microalbuminuria: urinary albumin excretion ratio ≥ 20 μ g/min or albumin:creatinine ratio ≥ 30 mg/g.

AMERICAN HEART ASSOCIATION CRITERIA

There is confusion as to whether, in 2004, the AHA/NHLBI intended to create another set of guidelines or simply update the NCEP ATP III definition. According to Scott Grundy, University of Texas South western Medical School, Dallas, Texas, the intent was just to update the NCEP ATP III definition and not create a new definition.⁴

- Elevated waist circumference:
 - Men — greater than 40 inches (102 cm)
 - Women — greater than 35 inches (88 cm)
- Elevated triglycerides: Equal to or greater than 150 mg/dL (1.7 mmol/L)
- Reduced HDL ("good") cholesterol:
 - Men — Less than 40 mg/dL (1.03 mmol/L)
 - Women — Less than 50 mg/dL (1.29 mmol/L)

- Elevated blood pressure: Equal to or greater than 130/85 mm Hg or use of medication for hypertension
- Elevated fasting glucose: Equal to or greater than 100 mg/dL (5.6 mmol/L) or use of medication for hyperglycemia

CRITERIA ACCORDING TO AYURVEDA

Similar set of features has been explained by our great Acharyas Charaka and classified under *Santarpanjanya roga*⁵.

Santarpanjanya roga which are caused by due to excess intake calorie intake and decreased physical activity and sedentary life style.

- Madhumeha – Diabetes Mellitus.
- Ati Sthoulya – Obesity.
- Srotsam Lepa – Artherosclerosis.
- Dhamani pralepa – various arterial disorders.
- Aam pradosha – various metabolic diseases.

If we clearly analyze the quotation we will find the similar set of features and can be considered as Syndrome X is explained long back only in the classical text in a different manner.

Explanation given by Acharaya Charaka in sootra sthana the *Santrapanyajanya roga* the

group of disorders which are due to excessive calorie intake if analysed properly is nothing but the all features which are grouped under Syndrome X.

Similarly, while explaining the Rasa dhatu Acharya Sushruta explains about the *Rasa nimitta roga*⁶ and under that he explains the disorders which arise due to excessive calorie intake and obesity with its complication.

CAUSES

- Stress.
- Overweight and obesity.
- Sedentary life style.
- Diabetes mellitus type 2.

PATHOPHYSIOLOGY

- It is common for there to be a development of visceral fat, after which the adiposities (fat cells) of the visceral fat increase plasma levels of TNF α and alter levels of a number of other substances (e.g., adiponectin, resistin, and PAI-1). TNF α has been shown not only to cause the production of inflammatory cytokines, but also possibly to trigger cell signalling by

interaction with a TNF α receptor that may lead to insulin resistance.

- Acharya Sushruta explains about the Sthaulya (Obesity) and its complications which similar as that of the present day metabolic syndrome due to the *Rasa nimitt* – Due to the first part formed after the food digestion.

COMPLICATIONS

- Cardiac problems.
- Cerebrovascular complications.
- Hormonal disturbances.
- Hepatic and renal complication.

MANAGEMENT

A unique description about the management given in the classics, both external and internal medications, have been explained which are time-tested, effective and safe.

There are:

External Treatment

Rookshana karma such as Udvaratana – Powder massage with the Triphala, kottamchukadi choorna and Haridra.

Lekhna drugs such as – Scrapping in nature – Shilajatu, Triphala

Different yoga explained in as follows⁷ –

- Shilajatu Rasayana,

- Gugglu preparation,
- Loha preparation,
- Rasanjana,
- Madhu,
- Yava, Mudga, Kordusha and Uddalaka.
- Virechna karma for body purification.

Internal Treatment

- Vanaspati Kashaya.
- Lekhana Kashaya.
- Atparana Chikitsa.
- Langhana and
- Kaphahara and Medohar chikitsa.

Research trial will be conducted by on *Sthaulya (Obesity)* by the Junior Resident of institute (Dr Vinay Tiwari) by using *Vidangadi lauha* and *Krimighanadi Kashaya*.

Patients who presents with the clinically detected diabetes mellitus or stage of pre diabetes can be managed with the *Daru haridra* which is proved efficacious in the management of *Madhumeha (Diabetes mellitus)* in the classics which is time tested and evidence based the research will be conducted by using the same herbal composition by Junior Resident of institute (Dr Kamal Kishore).

Patients who presenting with Obesity - currently research trial is going in institute by Senior Resident(Dr Midhun Mohan) by using *Shailayadi choorna* for *Udvaratana* followed by *Vamana* with significant results. Considering the above concepts paper presentation was done in international conference held in New Delhi *icmhaiims2014*, paper Entitled as Ayurvedic approach to management of metabolic disorders w.s.r. to – Syndrome ‘X’ by Senior resident of institute (Dr Satender Tanwar). The whole idea of understanding the metabolic disorders and *Santarpanyajanya vikara* and Refrences mentioned in Sushruta Samhita sootra sthana regarding “*Rasa nimittmev staulyam*” similar that of current pandemic metabolic syndrome or Syndrome X and their management was explained by Prof. of institute (Dr Kiran M Goud).

REFERENCES

1. Kaur J (2014). "A comprehensive review on metabolic syndrome". *Cardiology Research and Practice* 2014: 943162. doi:10.1155/2014/943162.PMC 3966331. PMID 24711954.
2. Ford ES, Giles WH, Dietz WH (2002). "Prevalence of metabolic syndrome among US adults: findings from the third National Health and Nutrition Examination Survey". *JAMA* 287 (3): 356–359. doi:10.1001/jama.287.3.356. PMID 11790215.
3. Alberti, KGMM; Zimmet (1999). "Definition, Diagnosis, and Classification of Diabetes Mellitus and its Complications". World Health Organization. pp. 32–33. Retrieved 25 March 2013.
4. Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (May 2001). "Executive Summary of the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III)". *JAMA: the Journal of the American Medical Association* 285 (19): 2486–97. doi:10.1001/jama.285.19.2486.PMID 11368702.
5. Charaka samhita, Sootra sthana, Chaukhamba publication, Reprint edition – 2011 23rd chapter, verse 03-07, pg no – 122, pp – 738.
6. Shushruta samhita, Sootra sthana, Chaukhamba publication, Reprint edition – 2011 15th chapter, verse 32, pg no – 73pp-824.
7. Shushruta samhita, Sootra sthana, Chaukhamba publication, Reprint edition – 2011 15th chapter, verse 32, pg no – 73pp-824.