

AYURVEDIC APPROACH OF NON-COMMUNICABLE DISEASES W.S.R. TO CARDIO VASCULAR DISEASE

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Article Received on
21 Nov. 2018,
Revised on 11 Dec. 2018,
Accepted on 01 January 2019
DOI: 10.20959/wjpr20191-14004

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ABSTRACT

Non-Communicable Diseases (NCDs) is a non infectious or non transmissible disease. These are also known as chronic diseases. The main types of Non communicable diseases are Cardio- vascular diseases, Cancer, Chronic respiratory disease and Diabetes. NCDs disproportionately affect people in low- and middle-income countries. Of the 57 million global deaths in 2008, 36 million or 63% were due to NCDs. People of all age groups, regions and countries are affected by NCDs. These conditions are often associated with older age groups, but evidence shows that 15 million of all deaths attributed to NCDs occur between the ages of 30 and 69 years.^[1] Major risk factors of Non

communicable diseases are physical inactivity, unhealthy diet, use of alcohol or tobacco and faulty life style. Main risk factors of NCDs are Smoking, High blood pressure, Obesity, insufficient physical activity, Alcohol and Unhealthy diet. Ayurveda, the healing science is needed in daily regimen of life for wellness and illness in today's scenario. Prevention and management of NCDs is possible by implementation of beneficial Ayurvedic concepts. *Tridosha* balance can be maintain by following rules of *Ahar*, *Vihar*, *Nidra*, *Brahmacharya*, *Rasayan* and *kriyakal*.

KEYWORDS: NCDs, Cancer, Diabetes, Obesity, *Tridosha*, *kriyakal*. *Rasayan*.

INTRODUCTION

Non-Communicable Diseases (NCDs) are characterized by gradual onset, multi factorial causation, long natural history, prolonged treatment and multidisciplinary approach in prevention and control. Non-Communicable Diseases (NCDs) mainly cardio and cerebrovascular diseases, chronic respiratory diseases, diabetes and cancer are top killer in

the world. 53% of all deaths are due to NCDs. One third of these deaths are premature and occurred before the age of 60 years, thus affecting economically productive individuals. NCDs are common among poor and impoverished families. According to WHO statistics for 2011, in India NCDs are estimated to account for 53% of all deaths. Of these deaths, cardiovascular diseases and diabetes are the most common cause of deaths due to NCDs in India.^[1,2]

Risk Factors^[2]

Non-Communicable Diseases (NCDs) are attributed to lifestyle factors. Lifestyle of human beings are greatly affected by socialization which impart habits of alcohol, tobacco, coffee and lack of exercise etc. The risk factors can be categorized into modifiable and non-modifiable risk factors. Modifiable risk factors are factors which can be reduced by intervention. These factors are:

- Smoking
- High blood pressure
- Obesity
- Insufficient physical activity
- Dyslipidaemia
- Alcohol

Non- modifiable risk factors includes age, sex, genetic susceptibility and family history.

Types of NCDs^[2]

There are number of NCDs, but the major public health problems are

1. Cardiovascular disease
2. Diabetes
3. Hypertension
4. Cancer
5. Chronic respiratory diseases
6. Mental disorders

Ayurveda and NCDs

Ayurveda is an eternal science which is in use since thousands of years in Indian sub-continent. Ayurveda has become an essential part and parcel of daily regimen of life in wellness and illness. Major and important concepts described in Ayurvedic texts under

various headings are very useful for prevention and management of Non communicable diseases. These concepts are *Ahar* (Dietetics), *Nidra* (sleep), *Brahamcharya* (ethics of sexual life), *Vihara* (living style & norms), *Ausadha* (Preventive/Supplementary medicine) and *Prakriti*. Observance of such Ayurvedic components of life are basically tools & primary preventive protocols of diseases and keep stress away. *Ahara*, *Vihara* and *Rasayana* (*Acharya Rasayana* & *Naimitika Rasayana*) are three dimensional approach towards maintenance of NCDs.

Here concept of *Kriyakal* is widely discussed. Hence theories of system regulation lie at the heart of understanding *dosha* imbalances and *Shadkriyakala*. It is important for understanding the root of disease and for a desirable approach towards the disease. *Shadkriyakala's* central concept of 'Doshas going out of balance' involves successive stages of imbalance represented by sequential stages of departure from equilibrium.

Kriyakal^[3]

In this Ayurvedic context pathophysiology of disease in six successive stages are elaborated. These six stages are known as "*Shat Kriya Kal*". Due to various causes when *Tridosh* gets vitiated, it also vitiates *dhatu*s. From the time of imbalance of *Tridosh* a pathological changes occurs in the body beginning at microscopic level to macroscopic level. These pathological changes occur in *dosha*, *dushya*, *agni*, *srota* and other elements of body. These six stages permit the thorough recognition and elimination of disease long before it progress into evidently differentiated clinical symptom. The six stages are –

1. Sanchaya (mild accumulation of Doshas)

This is the stage of accumulation of *Doshas*. The features of this stages are fullness of *Koshta* (alimentary tract) and stability (absence of movement), these are due to *vata*. Mild increase of temperature due to *Pitta*. Feeling of heaviness of body and lassitude due to *kapha*. This is the *prathama kriya kal*. Such symptoms signals physiological imbalance, this should not be ignored, people has common tendency to ignore these symptoms as it may disappear themselves after some hours.

2. Prakopa (aggravation of the Doshas)

This is the second stage of aggravation of *Dosha*, which produces *kosthatoda*, *sancharan* (mild and diffuse pain and movement inside the alimentary tract), *Amlika* (sour bleching) *Pipasa* (thirst), and *Paridaha* (burning sensation all over the body).

3. Prasara (spreading)

In this third stage, aggravated *Doshas* are spread to other places. Features of *vata dosha* are *vimarga gamana* (movement of things in wrong direction inside the alimentary tract) and *Atopa* (gurgling sound in the abdomen), features of *pitta dosha* are *Osha* (feeling of burning sensation locally), *Chosa* (sucking pain), and *Paridah* (burning sensation all over the body), features of *kapha dosha* are *Arochaka* (loss of appetite), *Avipaka* (indigestion), and *Chardi* (vomiting). This is the stage of disease activity.

4. Sthana Samshraya (localization)

This is the fourth stage which is also known as stage of disease augmentation. In this stage specific susceptibility to serious infection and degenerative disease start. Aggravated *Doshas* become localised at certain places and produces disease in such places. Such examples are –

LOCALIZATION	DISEASE PRODUCED
Abdomen	Tumors, abscess, <i>Visuchika</i> (gastroenteritis), diarrhea etc.
Urinary bladder	Diabetes, urinary calculus, retention of urine etc.
Rectum	Fistula in ano, piles etc.
Skin, muscles, blood	Leprosy, erysipelas, skin diseases etc.
Fat tissue	Benign tumor, goiter, lymphadenoma of neck etc.
Legs	Filariasis, gout, sprain etc.
Entire body	Fever, disease affecting whole body.

5. Vyakti –(manifestation of disease)

This is the fifth stage in which clearly differentiated symptoms first appear. It is the stage of symptom manifestation. Now, disease affects the ability of body to maintain immunity and healthy functioning. At this stage, structural dysfunction or damage has progressed to the point where the illness actually activates.

6. Bheda -(chronicity)

This is the six and last stage of *Kriya Kaal*. It is also known as the stage of complication. This stage gives information about detailed understanding of group of symptom that have surfaced the fact that all the doubts regarding the nature of the disease are eliminated. If the diseases are not treated in this stage they will become incurable.^[11]

Rasayan therapy^[4]

In ‘*Ashtanga*’ the eight part of Ayurveda, *Rasayan* has an important place. As described in Ayurvedic text, the aim of Ayurveda is “*Swasthasya Swavaasthya Rakshanam Aturasya Vikar Prashmanam cha*” i.e. it’s not only about the treatment of disease but how to maintain

and achieve good health throughout life. It is better to be free from various types of diseases by following the rules of *Sadavritta* and *Achar Rasayan* rather than taking treatment after being affected by diseases. Although *Rasayan* therapy provides strength and immunity to body but it also beneficial in mental disorder, peacefulness and calmness of mind. *Rasayan* acts in our body at microscopic level. It has been proven that *Rasayan* acts on *Dhatus* level, on *Agni* level and also on *Srotas* level. There are lots of *Rasayan* which can be use undoubtedly on regular basis which can facilitate protection from various ailments. Some important *Rasayan Dravya* are described here;

Rasayan Dravya^[5]	Medicinal Use
Rauwolfia serpentine	Hypertension
Commiphora mukul	Hyperlipidemia
Momordia charantia	Diabetes
Terminalia chebula	Anti-ageing
Celestrus paniculatus	Mental disorder
Terminalia arjuna	Cardiotonic
Piper longum	Respiratory disorder

Cardiovascular Disease

Cardio vascular disorders continue to be the major cause of mortality representing about 30% of all deaths worldwide. With rapid economic development and increasing westernization of lifestyle in the past few decades, prevalence of these diseases has reached alarming proportions among Indians in the recent years. In Ayurveda cardiovascular disease discussed under "*Hridaroga*". *Hridya* has been referred to be the site of psyche.

Dosha in Heart

- *Praan Vayu* - Responsible for conduction of heart.
- *Vyana Vayu* - Responsible for the blood circulation.
- *Saman Vayu* -Responsible for *Annaras* (end product of digestion) to carry toward heart.
- *Sadhak Pitta* –Responsible for action of heart.
- *Avalambak Kapha*- Responsible for strength of body and mind in combination with *Annaras*.

Nidan of Hridarog (Etiological factors of heart disease).^[6]

• <i>Tikta dravya</i> (bitter & spicy)	• <i>Ruksha anna</i> (eatable causing dryness)
• <i>Ushan dravya</i> (things creating heat in body)	• <i>Viruddha bhojana</i> (incompatible diet)
• <i>Addhyashana</i> (over eating)	• <i>Ajirna bhojana</i> (eating without digestion)
• <i>Asatmya bojana</i> (un adapted diet)	• <i>Adhika vyayama</i> (excessive exercise)
• <i>Veg sandharan</i> (holding natural urges)	• <i>Abhigata</i> (trauma)
• <i>Aghata</i> (shock)	• <i>Chinta</i> (anxiety)
• <i>Bhaya</i> (phobia)	• <i>Trasa</i> (mental shock)
• <i>Ama</i> (incomplete digestion)	• <i>Ati virecana</i> (excess loose motions)
• <i>Ati vasti</i> (excess enemas)	• <i>Karshana</i> (excessive thin body)
• <i>Gadaticara</i> (disobeying norms of diet)	• <i>Chardi</i> (vomiting)

General Signs and Symptoms of Heart Disease.^[6]

• <i>Shwasa</i> (dyspnoea)	• <i>Kasa</i> (cough)
• <i>Hikka</i> (hicough)	• <i>Kaphotkleda</i> (expectoration)
• <i>Vamana</i> (vomitting)	• <i>Asya vairasya</i> (distaste in mouth)
• <i>Trisha</i> (excessive thirst)	• <i>Vaivarnya</i> (discoloration or palor)
• <i>Aruci</i> (anorexia)	• <i>Murcha</i> (shock)
• <i>Jvara</i> (fever)	• <i>Ruja</i> (pain)

Types of Hridroga- There are five types of *Hridroga* -*Vataj*, *Pittaj*, *Kaphaj*, *Tridoshaj* and *Krimij*.

Samprapti (etiopathogenesis) of Hridrog

Vata getting obstructed by *kapha* and *pitta* present in the chest and combining with *rasa* present in the heart, give rise to pain which causes obstruction to breathing, this is called '*Hridshula*' produced by *rasa* and *Vata*. Suppressions of the urges, ingestion of food of hot potency and dry in great quantities, use of incompatible foods, more quantity of food often, uncooked food in more quantity by these causes *Dosha* get aggravated, vitiate the *ras* present in the heart and give rise to pain in the heart, this is known as *Hridroga*.

Fixed and Modifiable Risk Factors

Fixed risk factors	Modifiable Risk Factors
Age	Hypertension, diabetes, hyperlipidemia, stroke and peripheral vascular disease in first degree relatives.
Sex	Sedentary lifestyle (lack of exercise)
Family history of CVD	Smoking (tobacco in any form)
Post menopause women	Obesity
	Hypertension
	Diabetes
	Hyperlipidemia

High Risk Subjects

✓ Family history of CAD, hypertension, diabetes, hyperlipidemia, stroke and peripheral vascular disease in first degree relatives.
✓ Sedentary lifestyle (lack of exercise)
✓ Smoking (tobacco in any form)
✓ Obesity
✓ Hypertension
✓ Diabetes
✓ Hyperlipidemia

Key Steps to Reduce Heart Attack Risk

- Stop smoking
- Lower high blood pressure
- Reduce high blood cholesterol
- Aim for a healthy weight
- Be physically active each day
- Manage diabetes

Stress Reduction

- Urbanization and Westernization of lifestyle are taking the toll.
- Fast life now guided by the IT revolution is leaving many of us stressed out even at the beginning of the day.
- People with established cardiovascular illnesses should seriously consider lifestyle modification. This includes yoga, meditation, relaxation, exercises and even change of job and / or place.
- Awareness of the stress as a risk factor by the patient is very important.
Any kind of psychological disturbances will lead to a disturb patho-physiology of heart. Hence it is suggeseted to protect the heart from every kind of stress.

Treatment

- Elimination of the cause (*Nidana Parivarjana*).
- Rest - mental and physical relaxation.
- Dietary & life style modifications.
- Palliative and purification (*Samana & Sodhana*) treatment.^[7]

Single Herbs: *Pushkarmula, Arjuna, Haritaki, Triphala, Methi, Karcura, Punarnava, Guggulu, Vaca*, etc have been proved anti-anginal, anti-ischaeemic, anti-hyperlipedemic, anti-

arrhythmic, cardio-protective and cardio-corrective as well. Properly selected drugs for proper case, at proper time, for a proper period can prevent and avert heart emergencies and surgeries.

DIETARY CONSIDERATIONS

Pathya-Apathya in Hridroga (Do's and don'ts): Diet is an important factor responsible for coronary heart disease (CHD). A major part of its effect is mediated through lipo-proteins. A high portion of energy from saturated fat raises the LDL (bad cholesterol), where as a high portion of energy from unsaturated fat (soyabean oil, sunflower oil, mustard oil, cotton seed oil, til oil, rice bran oil, etc) raises HDL (good cholesterol).

To prevent coronary blockage, total fat intake must consist of no more than 10-15% of the total calorie. Other dietary ingredient with beneficial effect includes- anti-oxidants, vitamins (vit-B, C, E), flavonoids, phyto-estrogens and fibre, present abundantly in fruits & vegetables.

Do's

Have wheat, Yava, Mudga (green gram), horse gram, cabbage, gourd, serpent gourd, Alibanam (Tendil), ginger, garlic, Onion, Dry ginger, Old pumpkin Pomegranate, mango, grapes, lemon, Orange, Honey, hot water, Cow's ghee, *Ajawayana*, Safflower oil, Sunflower oil, Regular exercise- walking, yoga etc.

Don'ts

Eat Maize. Jvara, Varak, Pot hurbs, bitter gourd, Sago ,Pea, Black gram, Cow pea, Kidney beans, fish, Aquatic animals meat, Red meat, Milk, Milk products, Avoid stress and fatigue.

CONCLUSION

Non Communicable Diseases (NCDs) carrying a major burden for public health in developing countries. The recent rises in morbidity and mortality of NCDs delivering awareness at international level that now the time has come for positive implementation of treatment protocol for NCDs. Ayurveda is hopefully emerging as a great scope in this field. First of all concept of *Kriyakal* is essential to understand the disease and its nature. So that we can combat any sort of ailment in earlier stages by following preventive aspects. Theory of *Rasayan* therapy including *Achar Rasayan* is beneficial not only for physical health but also

for mental disorders. The development of a country is depends upon its healthy individuals, so all the endeavor should be align for practically adapting Ayurveda, “The elixir of life”.

REFERENCES

1. Park's Textbook of Preventive And Social Medicine edited by K.Park, Banarsidas Bhanot Publications, 23rd edition 362-364.
2. API Text Book of Medicine Vol-1 edited by YP Munjal, Jaypee Brothers Medical Publications, 10th edition 12-14.
3. Sushruta, Dalhana, Sushruta Samhita, Vol -1, edited by Prof. K.R.Srikanta Murthy, 2nd edition, 2004, chowkhamba orintelia publication, Varanasi; Sutra sthana 21/ 18-36
4. Kayachikitsa Vol-1 edited by prof. Ramharsh Singh, Chowkhamba Sanskrit Publications, 2nd edition 426-430.
5. Comprehensive Research Methodology edited by Prof.S.Suresh Babu, chowkhamba orintelia publications, 1st edition 70-71.
6. Agnivesha, Charak, Dridhabala, Charak Samhita, Chikitsa Sthana, Madatyaya Chikitsa adhyaya 24/ 60 edited by by Prof. Priyavrat Sharma, 9th edition 2005, Chowkhamba Orientalia, Varanasi.
7. Agnivesha, Charak, Dridhabala, Charak Samhita, Vimana Sthana, Srotovimana adhyaya 5/16 edited by by Prof. Priyavrat Sharma, 9th edition 2005, Chowkhamba Orientalia Varanasi.