

**A CRITICAL STUDY OF TRANSITIONAL EPIDEMIOLOGY IN CARDIO - VASCULAR DISEASES: AN AYURVEDIC PERSPECTIVE****Parkhe Pramod S<sup>1</sup>, Kolarkar Rajesh<sup>2</sup>**

<sup>1</sup>P. G. Scholar. Ayurveda Samhita Siddhant Dept, Y.M.T. Ayurvedic Medical College & Hospital – PG Institute, Kharghar, Navi Mumbai, India

<sup>2</sup>Professor, H.O.D & Guide, Ayurveda Samhita Siddhant Dept, Y.M.T. Ayurvedic Medical College & Hospital – PG Institute, Kharghar, Navi Mumbai, India

**Corresponding Author:** [pramodparkhe90@gmail.com](mailto:pramodparkhe90@gmail.com)<https://doi.org/10.46607/iamj09p6042022>**(Published Online: May 2022)****Open Access**

© International Ayurvedic Medical Journal, India 2022

**Article Received:** 25/05/2022 - **Peer Reviewed:** 05/06/2022 - **Accepted for Publication:** 06/06/2022

Check for updates

**ABSTRACT**

Cardio-vascular disease is now the most common cause of death worldwide. The global rise in CVD is the result of an unprecedented transformation during the 20<sup>th</sup> Century. This epidemiological transformation is due to industrialization, urbanization, & associated Lifestyle changes. The main features of the transition include a decline in mortality, increase in Life expectancy, & a shift in the leading causes of morbidity & mortality from Infectious & Parasitic diseases to Non-Communicable, Chronic, & Degenerative Diseases. The Transition is divided into Four basic stages: Pestilence & Famine, Receding Pandemics, Degenerative & Man-made Diseases, & Delayed Degenerative diseases. A Fifth stage, characterized by an epidemic of Inactivity & Obesity, is emerging in some countries<sup>1</sup>. In Charak Samhita these concepts are in scattered form like *Krumi* (Germ Theory), *Aam* (Dysmetabolism), *Santarpanjanya* (Overeating), & *Apatarpanjanya* (Malnutrition), *Upasthambhit* (Obstructive) & *Nirupstambhit* (Degenerative), *Viruddha Ahar* (Incompatible Food), *Gramya Ahar*<sup>2</sup> (Processed Food). Therefore, it gives an alternate integrated way of understanding Epidemiological Transition.

**Keywords:** *Krumi, Santarpanjanya, Apatarpanjanya, Upasthambhit, Nirupstambhit*

## INTRODUCTION

Cardiovascular Disease has emerged as the major cause of 30% of deaths worldwide. A pragmatic and holistic approach can say to be much effective in the prevention of such diseases. Ayurveda has given due consideration to the role of a healthy diet regimen and social conduct in the maintenance of Doshic equilibrium and health. This can halt the progress of cardiac pathology and revert to a better healthy state. The epidemiologic stages of diseases can be integrated with ayurvedic pathology thus allowing us to recognize and treat the underlying or subtle diseases. Charaka has mentioned most of the pathological principles in the Samhita. We will integrate the same in the following manner.

1. The age of pestilence is marked by malnutrition infectious diseases and high infant and child mor-

tality that are offset by high fertility. Tuberculosis, dysentery, cholera, and influenza are often fatal, resulting in a minimum life expectancy of about 30 years. CHD which accounts for less than 10% of death takes the form of rheumatic heart disease and cardiomyopathy due to infection and malnutrition. *Kiyantashirasiya adhyay (Sutrasthan)*<sup>3</sup> - Charaka has mentioned the *Krimija Hrudroga & Shiroroga* (Infectious Heart & Neurological Diseases), *Sapta Dhatu Kshay* (Emaciation), *Oja kshay* (Immunity Suppression), *Vidradhi* (Abscess) Internal & External Abscess with complications. Acharya has also listed the *Dosha Gati* i.e. normal and abnormal movements.

**Table 1:** Complications of *Vidradhi*-(Abscess)

<i>Upadrava</i> :--	Complications: --
<i>Trishna</i>	Thirst
<i>Shwas</i>	Dyspnea
<i>Mansa Koth</i>	Gangrene
<i>Moha</i>	Confusion
<i>Hikka</i>	Hiccough
<i>Mad</i>	Intoxication
<i>Jwara</i>	Fever
<i>Visarpa</i>	Cellulitis
<i>Marmasanrodh</i>	Vital Organs Dysfunction

2. During the age of receding pandemics improvement in public health systems, cleaner water supplies, and improved nutrition combined to drive down deaths from infectious disease and malnutrition. But deaths due to CVDs increased. Rheumatic valvular disease, Hypertension, Coronary heart disease, and Stroke are the predominant forms of CVD. *Santarpaniya adhyay (Sutrasthan)*<sup>4</sup> - Charaka has mentioned the diseases due to Malnutrition / *Apatarpan* (Loss of Appetite, Muscle mass, Diminished Hearing, Psychosis, Palpitation, etc.) & Over-eating / *Santarpan* (Diabetes, Obesity, etc.).
3. The age of degenerative and man-made disease is distinguished by mortality from non-communicable diseases primarily CVD surpassing mortality from malnutrition & infection disease. Calorie intake particularly animal fat increased leading to coronary heart disease and Stroke. *Viddhi Shonit Adhyay(Sutrasthan)*<sup>5</sup>- Diseases due impure blood are being listed, like stomatitis, eyes disorder, oral foul smell, cellulitis, skin disorders, etc. *Atreyay Bhadrakapiyay adhyay(Sutrasthan)*<sup>6</sup> - Charaka has mentioned diseases due to Incompatible food combinations are rising.

**Table 2:** Diseases due to the Incompatible Food habits

<i>Shandhya</i>	Impotency	<i>Pandu</i>	Anaemia
<i>Andhya</i>	Blindness	<i>Aam Vish</i>	Sepsis
<i>Visarpa</i>	Cellulitis	<i>Killaas/Kushtha</i>	Skin Disorder
<i>Jalodar</i>	Ascites	<i>Grahani Dosh</i>	Malabsorption
<i>Visphot</i>	Boils	<i>Shoth</i>	Oedema
<i>Unmaad</i>	Psychosis	<i>Amlapitta</i>	Hyperacidity
<i>Bhagandar</i>	Fistula	<i>Jwar</i>	Hyper Pyrexia
<i>Murcchha</i>	Syncope	<i>Pinas</i>	Chronic Sinusitis
<i>Mad</i>	Intoxication	<i>Santan Dosha</i>	Congenital Diseases
<i>Adhmaan</i>	Bloating	<i>Bhrun Nash</i>	Intra-Uterine Foetal death
<i>Galgraha</i>	Pharyngitis	<i>Death</i>	Reduced Life expectancy

4. The age of delayed degenerative diseases CVD and cancer remain the major causes of morbidity and mortality. CHD mortality decline in the area of preventive strategies for example smoking cessation programs and effective blood pressure control, acute hospital management and technology advances such as available Bypass Surgery or PTCA. Coronary Heart disease, Stroke & Congestive Heart Failure are the primary forms of CVD. *Rasayan Adhyay (Chikitsasthan)*<sup>7</sup> - Charaka has listed diseases due to *Gramya Ahar*(Processed Food) because of *Dhatu-Shaithilya* (Tissues – Noncompliant)

5. In the industrialise world physical inactivity continue to decline while total calorie intake increased. The resulting epidemic of overweight and obesity may signal the start of the age of inactivity and obesity. Type 2 diabetic mellitus, Hypertension, & lipid abnormality are on the rise. *Vaatvyadhi Adhyay(Chikitsasthan)*<sup>8</sup> - Charaka has divided the diseases into two categories i.e. *Nirupastambhita* (Degenerative - *Dhatukshya*) & *Upastambhita* (Obstructive - *Strotorodha*). Charaka has mentioned *Avarana*<sup>9</sup> where there is systemic congestion & obstruction. In today's times, we can see patients with Congestive Heart Failure.

**Table 3:** Complications due to Avarana (Congestion)

Complication	
<i>Hrudroga</i>	Heart Disease
<i>Vidradhi</i>	Peripheral Vascular Disease
<i>Pliha</i>	Splenomegaly
<i>Gulma</i>	Abdominal Swelling
<i>Atisar</i>	Diarrhea

**Table: 4**

Sr. No.	Stage of Transition	Ayurvedic Pathogenesis	Epidemic Diseases
1	Pestilence & Famines	<i>Krumi &amp; Apatarpan</i>	Infectious & Malnutrition
2	Receding Pandemics	<i>Upastambhita Vayu / Strotorodha</i>	Hypertension & Rheumatic Heart Disease, Stroke & CHD (Hemorrhagic)
3	Degenerative & Man-made Diseases	<i>Viruddha Ahar &amp; Gramya Ahar / Dhatu-Shaithilya</i>	Coronary Heart Disease (CHD) & Stroke (CVD): (Ischemic & Hemorrhagic)
4	Delayed Degenerative Diseases	<i>Nirupastambhita Vayu / Dhatukshya</i>	CHD, Stroke, (CHF) Congestive Heart Failure.
5	Inactivity & Obesity	<i>Aam &amp; Santarpan</i>	(Dysmetabolism)DM, HTN, Peripheral Vascular Disease (PVD), CHD, CVD & CHF

## DISCUSSION

After analyzing the Stages of Epidemic transition with the Ayurveda concepts it gives a comprehensive understanding of the transitional diseases and the current CVD reason for the highest mortality & morbidity.

## CONCLUSION

According to global burden of disease age standardized estimates nearly a quarter of all deaths in India are attributable to CVDs. The age standardized CVD death rate of 272 per lac population in India is higher than global average of 235 per lac population. It is observed that prevention is better than cure therefore Preventive measures are more significant in controlling the epidemics. Earlier communicable diseases are now controlled but the rise in non-Communicable diseases is significant. CVD remains to be the main cause of deaths worldwide due to the Risk Factors i.e. Behavioral – Tobacco, Diet & Physical Inactivity & Metabolic – Lipid levels, Hypertension, Obesity, Diabetes Mellitus. Ayurveda has *Dincharya* (Daily Regimen), *Rutucharya* (Seasonal Regimen), *Achar Rasayan* (Social Conduct) & *Sadavrutta* (Value Education), *Dharaniya* & *Adharniya Vega* (Suppression & Non-Suppression Urges) *Rasayan* (Rejuvenation) Therapy, *Panchkarma* (Detoxification), Yoga, Herbal medicines to control and treat the NCDs. Ayurvedic principles enable us to manage these high-risk diseases.

## REFERENCES

1. Thomas A. Gaziano, J. Michael Gaziano. Harrison's Principles of Internal Medicine. McGraw Hill Education (India) Private Limited. Chennai. 19<sup>th</sup> Edition 2019. Volume 3. Chapter 266e. Epidemiology of Cardiovascular Disease. Page 266e-1.
2. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 1.2.3.4.
3. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 1. Sutrasthan. Chapter 17. Verse 27-29. Page 538, Verse 36-40. Page 539, Verse 64-74. Page 552 & 555, Verse 111. Page 566.
4. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 1. Sutrasthan. Chapter 23. Verse 5-6 Page 662, Verse 27-28. Page 667.
5. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 1. Sutrasthan. Chapter 24. Verse 11-17. Page 675.
6. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 1. Sutrasthan. Chapter 26. Verse 102-103. Page 796.
7. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 3. Chikitsasthan. Chapter 1. Part 2. Verse 3. Page 32.
8. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 3. Chikitsasthan. Chapter 28. Verse 60-61. Page 374.
9. Banwari Lal Gaur. Charaka Samhita. Rashtriya Ayurved Vidyapeeth. Delhi. 2<sup>nd</sup> Edition 2019. Vol 3. Chikitsasthan. Chapter 28. Verse 235-236. Page 419.
10. CCRAS Article – Prevention of Cardiovascular Diseases – An Ayurveda Advocacy & Cardiology book.

**Source of Support: Nil**

**Conflict of Interest: None Declared**

How to cite this URL: Parkhe Pramod S & Kolarkar Rajesh: A Critical Study of Transitional Epidemiology in Cardio - Vascular Diseases: An Ayurvedic Perspective. International Ayurvedic Medical Journal {online} 2022 {cited May 2022} Available from: [http://www.iamj.in/posts/images/upload/3501\\_3504.pdf](http://www.iamj.in/posts/images/upload/3501_3504.pdf)