

## AN IMPACT OF CURRENT LIFESTYLE IN MANIFESTATION OF ATHEROSCLEROTIC CARDIAC DISORDERS AND ITS PREVENTION THROUGH AYURVEDA

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## ABSTRACT

The current world is influenced by western culture ignoring the basic principles of life and maintaining an inappropriate relationship with the environment leading to lifestyle disorders. Cardiovascular diseases are burning issues leading to mortality. Only from the half of the 20<sup>th</sup> century, has there been a rapid increase in the incidence of cardiovascular disorders. Atherosclerosis is a condition in which an artery wall is thickened due to the deposition of fatty materials like cholesterol when it lodges in coronary circulation it is called atherosclerotic cardiovascular disorder (ACD). This occurs gradually due to the impact of current lifestyle like irregular diet, inappropriate ecological activities, bad codes and conducts of life. *Ayurveda* explains daily regimens, seasonal regimens, social conducts which prevents individuals from these pathological conditions. Modifying the current lifestyle and following the principles mentioned in classics and adopting *Ritu Shodhana* are boons to prevent ACD to a greater extent.

**Keywords:** Current lifestyle, ACD, *Ritu shodhana*

## INTRODUCTION

*Ayurveda* is the science of life that emphasises the importance of maintenance of the health of a healthy person and curing the disease of the ill and elaborates the different regimens to prolong the life span. Due to hurry curry worry life, there is negligence towards the systematic way of living which is gifted from our ancestors, thus causing a higher incidence of lifestyle disorders and cardiac diseases are one among them. Pathology of heart due to irregular diet and life is the most common aetiology in the present scenario. Sedentary life results in high cholesterol levels and ends up with atherosclerotic cardiac disorders. The way of life suggested in *Ayurveda* will work as a vaccine for all cardiac disorders.

### Aim and Objectives

The aims and objectives of the study are to critically study and analyse the impact of the current lifestyle in the manifestation of atherosclerotic cardiac disorders and their prevention through *Ayurveda*.

**Materials and Methods:** Ayurvedic literature, Modern literature, contemporary texts including journals and websites related to current lifestyle and etiological factors for atherosclerotic cardiovascular disorders and their prevention are studied.

**Current lifestyle:** The current lifestyle of our society is the root cause for almost all lifestyle disorders mainly ACD. The incidence of cardiac issues is rapidly increasing due to the following etiologies:

**Improper Diet:** If we keenly notice the food propensities of the current era, due to rapid urbanization people involve in excessive intake of refined carbohydrates, added salt and sugar, unhealthy fats and animal source foods, consumption of alcohol, smoking has become the part of day-to-day life. These ways of dietetics are the mirror image of *Sushruta's nidana*<sup>1</sup> like consumption of *Athiushna* (excessive hot), *Atirooksha* (dry foodstuffs), violating the eight factors of food intake and indulging in the *Adhyashana* (overeating), *Vishamashana* (irregular food habits), *Asatmya* (incompatible foods), *Ajirna bhojana* (indigestive food) may lead to *Hridroga* (cardiac disorders). Late wakeup, Irregular bowel habits, Physical excretion and sedentary life are increasing the incidence of cardiac disorders<sup>2</sup>.

**Suppression of natural urges:** Due to money-minded thinking of the society the way of working itself becomes a threat to the health. Employees in IT, business, marketing, travelling agency, commercialized education institutes are commonly ignorant towards natural urges. suppression of flatus, micturition, defecation, thirst, tears, coughing, exertion and seminal discharge leading the people to meet with *Hridroga*<sup>3</sup>. **Uncontrol over the suppressible urges:** To lead auspicious life we have to suppress wistfully curb (*Manasika Vega's*) like greed, envy, and emotional attachment<sup>4</sup> etc but in this competitive world everyone is ignorant towards these entities. This is increasing the incidence of cardiovascular disorders.

### Atherosclerotic cardiac disorders

Atherosclerosis is a progressive condition characterized by the accumulation of cholesterol in the arteries<sup>5</sup>. Low-density lipoprotein (LDL) is the culprit in the case of ACD, it can infiltrate into endothelium. As the day passes the atherosclerotic plaques are formed in the vascular intima and resulting in sudden obstruction of blood flow, when this phenomenon occurs in the coronary circulation the individuals meet with ACD, and hence LDL is also called bad cholesterol. The incidence rate of ACD is increasing at an alarming rate worldwide as a result of undesirable lifestyle patterns.

### Impact of the current lifestyle in the manifestation of ACD

Night awakening and late wake-up lead to impairment in the circadian rhythm and ampers the carbohydrate, protein and lipid metabolism in turn increasing the incidence of atherosclerosis in the greater blood vessels and resulting in ACD. *Acharya Vagbhata* mentioned that one should do exercise about half of their strength<sup>6</sup> but people are more affectionate to physical looks violating this conduct. Adverse effects of heavy exercise or gym lead to variation in the heart rate, plasma volume, stroke volume and blood pressure resulting in eccentric hypertrophy and anticipatory response from the heart and may end up with cardiovascular diseases. *Dharana* of *Vegas*-like *Adhovata*, *Shakrit*, *Mutra* leads to constipation which is a significant risk factor for cardiovascular disorders<sup>7</sup>. Suppression

of *Trishna*, *Ashru* leads to *Rasadusti* and low intake of water impacts on haematocrit and blood coagulation which increase the incidence of endothelial depositions of cholesterol resulting in ACD<sup>8</sup>. *Kasa*, *Shrama* *Shwasa vegadharana* leads to the changes in heart dynamics associated with variations in the intraabdominal pressure and intrathoracic pressure. *Sukravega* suppression impacts variation in endogenous concentration of the testosterone which triggers the aetiologies of ACD to manifest the disease rapidly. Stress is the most significant thing where most of the occupational fields of current life is confronting, leading to high-level cortisol in the body. It can cause an increase in blood cholesterol, blood sugar and blood pressure and progressiveness of ACD.

#### **Cardio care through Lifestyle modifications**

*Ayurveda* is the science of life that emphasises the principles of the way of living to attain longevity, some of the lifestyle modifications are a must for the prevention of ACD mentioned in classics as follows, *Brahmmuhrte jagarana*-which helps in the proper functioning of *Vatadosha* and has a significant effect on activation of defecation reflex, hence we can prevent constipation which is one among the risk factor for cardiovascular disorder. *Vyayama* -Physical exertion in the gym can be substituted with *Vyayama* which prevents the person from abnormal deposition of fat and lowers the cholesterol levels mainly LDL levels so that we can be far away from the atherosclerotic cardiac issues. *Veghadharana* - while explaining the disease manifested due to suppression of natural urges the most important disease is related to the cardiovascular system. *Sadrivittapalana* (code and conducts) explains to live in a well-organised manner which always maintains homeostasis in the body hence the morbid elements are always eliminated voluntarily and gives protection to vital parts like a heart.

#### **Cardio care through Ritu shodhana**

*Ritu* is the season which with specific ecological characteristics, humans are a part of it and should adopt the changes in the environment around us. If it fails, the health status will be deranged with an imbalance in the harmony of the *Doshas*. The warrior to face the changes in the different seasons has been excellently

explained in *Ayurveda* classics that is *Rithusodhana*, but in the present scenario, most of them fail and ignore the principles of ideal life which result in an imbalance in the health status. The seasonal variation influences the human body and leads to *Sanchaya Prakopa* of *Dosha*, the formation of atherosclerotic plaques is the best illustration of the ignorance of *Ritushodhana* and at an elderly age, most peoples face ACD as a resultant of this phenomenon. *Ritushodhana* includes purification therapies like *Vamana*, *Virechana* and *Rakthamokshana*, *Basti* in *Vasantha*(spring), *Sharath*(autumn) and *Varsharitu* which checks the atheroma formations. The LDL is the culprit for atherosclerotic conditions, by adopting these purification therapies of *Ayurveda* we can prevent this LDL deposition and it can be metabolised and excreted out from the body when it exceeds its physiological limits. *Vamana karma* (emetic therapy) practised in *Vasantharitu*, improves appetite, regulates bowel habits and improves sleep patterns. It decreases LDL and serum cholesterol level as a part of its *Kaphahara* action and prevents the incidence of atherosclerotic induced cardiac disorders<sup>9</sup>. *Virechana karma* (purgation therapy) practised in *Sharatritu* helps in the reduction of *Escherichia coli* colonization and it is effective over the gut flora dysbiosis which helps in the reduction of atherosclerotic plaques in the blood and hence prevents the individual from the ACD<sup>10</sup>. *Basti karma* can be adopted in *Varsharitu*, considered as an effective treatment for almost all diseases. The *Lekhana Basti* is a type of *Basti* that has a significant role in clearing the atheroma in the blood channels, which in turn prevents cardiovascular issues due to atherosclerosis<sup>11</sup>.

## **DISCUSSION**

Inappropriate relationship with the environment leads to meet with undesirable changes in health status and a rise in the incidence of a lifestyle disorder. The onset of Atherosclerotic cardiac disorder is gradual and mild but insidious. Food habits and lifestyle of this neoteric era are mimicking the etiological factors of ACD mentioned in classics and contemporary sources, which are shooting up the blood cholesterol and endothelial damage finally end up with atherosclerosis. On the other

hand, lifestyle patterns adopted in the present scenario are leading to suppression of natural urges which is the root cause for all diseases. The sedentary lifestyle increases the rate of atherosclerotic plaque formation by increasing LDL levels in the blood and progress its deposition in intima and stressful life leading to meet with an imbalance in the mental harmony and which triggers ACD. The dietic, daily regimens, seasonal regimens and social codes and conducts of *Ayurveda* classic for the healthy and happy living of mankind and the current pathetic lifestyle should be substituted by these factors. We get a bunch of diseases that are slow in manifestation but deadly, ACD is dangerous and causing significant deaths since the 20<sup>th</sup> century to slow down its incidence the *Rithusodhana* plays an important role. It clears up the channels of blood flow and maintains endothelial intima, vitiated *Dosha* due to indulgence in etiological factors of ACD are pacified by *Ritushodhana*. It acts on the intercellular level and cleanse up the high rich lipid molecules and prevents ACD significantly.

## CONCLUSION

*Ayurveda* is a holistic medicine from the past, today and for the future, which emphasises "*swasthasya swastha rakshanam*" the importance of prevention of diseases aimed first. The lifestyle followed in the present scenario is having a direct impact on the manifestation of cardiovascular disorders by increasing LDL levels and endothelial damages. ACD is the culprit causing morbidity and mortality at an alarming rate nowadays. Modifying current lifestyle with lifestyle patterns like *Ashtaaharavidhavisheshayatanas*, *Dinacharya*, *Ritucharya*, *Achararasyana* mentioned in *Ayurveda* classics will slow down the incidence rate. *Ritushodhana* is the purification therapy which is a much more scientific and significant preventive therapy for ACD and maintains the livelihood of mankind.

## REFERENCES

1. Susruta, Acharya YT. Susruta Samhita with Nibandhasangraha commentary by Dalhana and Nyayachandrika Panjika of Sri Gayadasa charya on Susruta Samhita of Susruta. Uttarasthana; chapter 43, verse 4-6. reprint ed. varanasi: Chaukambha publications:2009
2. Chatham JC, Young ME. Regulation of myocardial metabolism by the cardiomyocyte circadian clock. J Mol

- Cell Cardiol. 2013 Feb; 55:139-46. DOI: 10.1016/j.yjmcc.2012.06.016. Epub 2012 Jul 2. PMID: 22766272; PMCID: PMC4107417.
3. Pt. Hari Sadasiva Sastri Paradakara, Ashtangahrudaya of Vagbhata with Commentaries of Sarvangasundara of Arunadatta and Ayurvedarasayana of Hemadri, Sutra Sthana; Chapter 4, Verse 2. Varanasi: Chaukamba Sanskrit Sansthan, 2016.p.53
4. Vaidya Jadavji Trikamji Acharya, Charaka Samhita by Agnivesa with Ayurveda Dipika Commentary of Cakrapanidatta, Sutra Sthana; Chapter 7, Verse 27. Varanasi: Chaukambha Krishnadas Academy, 2015; p.50
5. Gerard.J. Tortora. Principles of anatomy and physiology. Fifteenth Edition. Wiley India(P) Ltd; 2017.p.728
6. Pt. Hari Sadasiva Sastri Paradakara, Ashtangahrudaya of Vagbhata with Commentaries of Sarvangasundara of Arunadatta and Ayurvedarasayana of Hemadri, Sutra Sthana; Chapter 2, Verse 10. Varanasi: Chaukamba Sanskrit Sansthan, 2016.p.27
7. Elena Salmoirago, Blother M.D. Constipation and Risk of Cardiovascular Disease among Post-menopausal Women. The American Journal of Medicine 2011; 124 (8): 714-723.
8. Hattori M, Azami Y. Searching for preventive measures of cardiovascular events in aged Japanese taxi drivers--the daily rhythm of cardiovascular risk factors during a night duty day. J Hum Ergol (Tokyo). 2001 Dec;30(1-2):321-6. PMID: 14564902.
9. Gupta B, Mahapatra SC, Makhija R, Adarsh K, Jirankalgikar N, Padhi MM, Devalla RB. Observations on Vamana procedure in healthy volunteers. AYU Int Res J Ayurveda. 2011;32(1):40-5.
10. Chaturvedi A, Nath G, Yadav VB, Antiwal M, Shakya N, Swathi C, Singh JP. A clinical study on *Virechana Karma* (therapeutic purgation) over the gut flora with special reference to obesity. Ayu. 2019 Jul-Sep;40(3):179-184. DOI: 10.4103/ayu.AYU\_302\_19. Epub 2020 Aug 8. PMID: 33281395; PMCID: PMC7685265.
11. Auti SS, Thakar AB, Shukla VJ, Ravishankar B. Assessment of Lekhana Basti in the management of hyperlipidaemia. Ayu. 2013 Oct;34(4):339-45. doi: 10.4103/0974-8520.127683. PMID: 24696569; PMCID: PMC3968693

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