



WOMEN AND CARDIOVASCULAR DISEASES IN INDIA – TIME TO ACT

Community Medicine

Shivam Sakshi	MPH Scholar, Department of Community Medicine, SGT Medical College ,Hospital & Research Institute, SGT University, Budhera, Gurugram.
Monika Kaushik	MPH Scholar, Department of Community Medicine, FM & HS,SGT University, Budhera, Gurugram
Madhulekha Bhattacharya	Professor and Head, Department of Community Medicine, FM&HS, SGT University, Budhera, Gurugram
Sudipta Basa*	Department of Community Medicine, FM&HS, SGT University, Budhera, Gurugram *Corresponding Author

ABSTRACT

Cardiovascular diseases (CVDs) are the leading cause of death globally and account for 32% of global deaths. Of these deaths, 85% are due to heart attack and stroke. In India, CVDs accounted for 27% of total deaths in 2017. CVDs affect Indians in their most productive mid-life years compared to later ages of the western population. Early age of onset, rapid progression, and the high mortality rate are particular causes of concern for CVD in India. Globally, ischaemic heart disease accounts for a third of all female deaths and is a cause for concern. Even the Lancet Women and Cardiovascular Disease Commission, 2021 has highlighted cardiovascular diseases as the leading cause of death in women. In India, the proportion of DALYs for CVDs amongst women has changed from 2.9% (in 1990) to 6.6% in 2016. Women are cared only during pregnancy and the immediate post-partum period, in other times their problems are overlooked. The modifiable risk factors such as tobacco, alcohol consumption and obesity have increased in women since 2013. The diagnosis of heart disease is often missed out in the Indian women because of their inability to express their ailments openly, compounded by factors like low socio-economic status, lower educational attainment and constrained access to medical care. Estimates suggest that almost 52% of all NCDs can be managed in primary care. The Indian government (GOI) is addressing the preventive aspect of NCDs through Primary Health Care at the Health & Wellness Centers and promote healthy lifestyles by targeted communication and screening at community level especially for the vulnerable, such as the women and elderly. Ayushman Bharat under GOI is being implemented to reduce out of pocket expenditure incurred towards management of non-communicable diseases amongst poor.

KEYWORDS

Cardiovascular Diseases, Women, Risk Factors, India

INTRODUCTION

Cardiovascular diseases (CVDs) are the leading cause of death globally. These diseases are greatly influenced by rapid unplanned urbanization, globalization of unhealthy lifestyles, and population ageing. In 2019, around 17.9 million people died from CVDs, representing 32% of all global deaths. Of these deaths, 85% were due to heart attack and stroke. Over three-quarters of CVD deaths take place in low and middle-income countries¹. In India, 2017, CVDs accounted for 27% of total deaths, followed by other NCDs 13%, chronic respiratory diseases 11%, injuries 11%, cancers 9%, diabetes 3%, and another 26% accounted for communicable diseases, maternal, perinatal, and nutritional conditions.¹ In India, coronary heart disease prevalence rates have been estimated over the past several decades and have ranged from 1.6% to 7.4% in rural populations and 1% to 13.2% in urban populations³. The age-standardized CVD death rate of 272 per 100,000 population for India is much higher than the global average of 235 as per the Global Burden of Disease; CVDs affect Indians in their most productive mid-life years than the later ages among the western population. Early age of onset, rapid progression, and the high mortality rate is a particular cause of concern for CVDs in India⁴. In India, one in four deaths is now because of CVDs with ischemic heart disease and stroke responsible for >80% of this burden.

⁵ Of concern is the rise in CVDs in women with gender differential mortality rates indicating more women deaths than men each year with CVDs. Though there has been a declining trend in the absolute prevalence of CVDs amongst women by 4.3% since 1990 globally, it is not uniform, and the world's most populous nations have noted an upsurge in rates both rural and urban such as in China (10%), Indonesia (7%), and India (3%)^{6,7}.

CVD AND WOMEN

World-wide various evidence has identified significant gaps in addressing the rising burden of CVDs among women. Even the Lancet Women and Cardiovascular Disease Commission, 2021 has highlighted cardiovascular diseases as the leading cause of death in women. Globally, Ischaemic heart disease accounts for a third of all female deaths. The commission emphasizes that cardiovascular diseases in women are understudied, under-recognized, underdiagnosed, and undertreated globally, despite being the leading cause of death in women worldwide.⁸ The risk among older females is

1.3 times (OR 1.35, 95% CI 1.303–1.403) to suffer from CVD than age-matched men⁸. Disparities in prevalence and outcomes of cardiovascular disease in women globally outline the significant impact of socio-economic deprivation in determining these differences and point to the importance of improving access to care by women and the need to reorganize the health systems to address the issue⁹.

CVD AND WOMEN IN INDIA

India is known to have the highest coronary artery disease (CAD) rates, and the conventional risk factors fail to explain this increased risk. The proportion of DALYs for CVD amongst women has changed from 2.9% (1990) to 6.6% in 2016⁹. India lacks structured data collection methods regarding cardiac mortality and morbidity despite this alarm. Besides, as most deaths happen at home without knowing the exact cause of death, the CVD related deaths are missed. Available hospital-based CV morbidity and mortality data do not represent the real prevalence of CV disease burden in India.⁴ Incidentally, there has been a declining trend in the absolute prevalence of CVDs amongst women by 4.3% globally since 1990, but it is not uniform, and the world's most populous nations have noted an upsurge both rural and urban, in China (10%), Indonesia (7%), and India (3%)^{6,7}. Women's health in India receives attention only during pregnancy and the immediate post-partum period. With the declining maternal mortality ratio from 167 in 2011–13 to 103 in 2017–19¹⁰ the emphasis on women's health is likely to reduce, resulting in missing the attention due for preventing CVDs among women. The diagnosis of heart disease is often missed out in females due to the inability of the women to express their ailments openly- a cultural taboo, compounded by factors like low socio-economic status, lower educational attainment and constrained access to medical care. Women are more substantially affected by cardiac disease compared with men both physically and psychosocially as per studies examining the health-related quality of life in patients with CVD.¹¹ Gender disparities exist in symptom patterns; females exhibit less typical symptom patterns than men as well as in their access to healthcare delivery and treatment. In a study in a tertiary hospital in Delhi, the attendance of women less than 30 years or more than 60 years or those living further away from the hospital¹² was less compared to other ages. In a country of 1.3 billion people with cultural and lifestyle diversities, several previous attempts

have been made to compile the burden of cardiovascular diseases in India; however, no comprehensive analysis exists to draw actionable conclusions.¹³ The National Health Policy 2017 highlights the importance of prevention and control with targets to reduce premature deaths from cardiovascular diseases by 25% and detection with the treatment of 80% hypertensive patients by 2025¹⁴

RISK FACTORS FOR CVDs AND SUSCEPTIBILITY OF WOMEN IN INDIA

CVD is commonly prevalent in all sections of society amongst all socio-economic strata. A phenomenon of reversal in the trend of the CVD in India is taking place with the shift of the gradient from affluent to lower socio-economic strata. Interestingly, because of women's longer life expectancy, overall deaths from cardiovascular disease are higher in women than in men, and this excess number of CVD deaths in women is likely to increase with the population improving their life span¹⁵

The four common and modifiable behavioral risk factors such as tobacco use, alcohol consumption, unhealthy diets, and a lack of physical activity are common in Indian women leading to a rising incidence of raised obesity, blood pressure, increased blood glucose and elevated blood lipids in them. (NFHS4&5)¹⁶ The National Family Health Surveys from 2016–19¹⁶ have yielded data indicating that tobacco and alcohol consumption has increased in women, whereas there is a reduction of consumption in men. Women are at a much higher cardiometabolic risk of CVD than men after losing their hormonal protection at menopause. Thus, hypertension is more prevalent in middle-aged and older women than men, and 22% are burdened with it¹⁴. Hypercholesterolemia is noted to be equal in men and women, but the protective HDL cholesterol is present in low levels among women. A nationwide study among women has reported a greater prevalence of multiple CVD risk factors in urban women similar to other studies on urban-rural differences regarding cardiovascular risk factors reported from Haryana, Delhi, Rajasthan, and Tamilnadu¹⁵.

Unfortunately, there has been a dramatic transition in the eating habits of the Indian population, who are moving from vegetarian diets and active lifestyles to fast foods and sedentary lifestyles. There is a drop in the consumption of vegetables and fruits, and only half (47%) of women consume dark green leafy vegetables daily while 54 % of females do not consume fruits even once a week¹¹

CONTROL AND PREVENTION OF CVDs IN WOMEN

Women in India are now facing the onslaught of cardiovascular diseases - including diseases in young women such as rheumatic heart disease and endomyocardial fibrosis¹⁷. Population-based epidemiological studies in India have reported significant gaps in the awareness, control of various risk factors and treatment for women.¹⁸ The myth about CVDs being a disease of men and of old age results in the non-acceptance of preventive behavior amongst young women. There is a need for customized, comprehensive information about CVDs and the risk involved for all ages of women. Trained health care workers can offer personalized risk calculations for CVDs and stroke in future, using Framingham Risk Score (FRS-CVD) for cardiovascular disease risk assessment, applicable to Indians¹⁹. The Government of India (GOI) is committed to meeting the SDG Goal (3) of Good Health and Well Being and is strengthening the delivery of comprehensive Primary Health Care and targeted communication for reducing the burden of non-communicable diseases through the establishment of Health and Wellness Centers. Evidence from 18 countries has shown that hypertension programs can be implemented efficiently and cost-effectively at the primary care level, resulting in decreasing incidence of coronary heart disease and stroke¹⁸. Ayushman Bharat, the National Health Protection Mission has been launched to meet the expenses for treatment of CVDs in families of low socio-economic status. Taking cognizance of the fact that CVDs need a multi-sectoral approach for control, ministries other than health are promoting healthy lifestyle, promoted through Food Safety and Standards Authority of India (FSSAI), Fit India movement by the Ministry of Youth Affairs and Sports, and Yoga related activities by Ministry of AYUSH as motivation measures for the community to keep fit²⁰.

CONCLUSIONS

CVDs, in India, are on the rise, and women are at greater risk because of their vulnerability physiologically and socially. There is a need to

revisit the strategy for prevention of CVDs, by addressing the gaps in knowledge and care for women, strengthen community mobilization and conduct screening at the community level to detect and manage CVDs timely at primary, secondary and tertiary level.

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