



Original Article

Cardiological Society of India: Position statement for the management of ST elevation myocardial infarction in India



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1. Preamble

The management of acute ST-Elevation Myocardial Infarction (STEMI) has rapidly evolved worldwide during the last two decades with the better understanding of the need for early reperfusion and protocol based pharmacotherapy. Despite global agreement on most issues related to the management of STEMI, wide discrepancies exist in implementation of Western guidelines in most of the developing world. The need has been felt that every country and society should adopt the existing scientific data, in combination with local limitations and strengths, and develop protocols that work best in their community.

India, home to the world's second largest population, is a country with extreme diversity in terms of geography, race, culture, literacy, infrastructure and economy. All these factors pose serious challenges in the management of acute diseases like STEMI. It is an important responsibility of the medical fraternity, policy makers and all concerned stake-holders to provide the best available therapeutic options in equitable fashion based on the current knowledge and available evidences. It is in this spirit that Cardiological Society of India (CSI) decided to involve leading experts of India, to prepare this 'Position Statement for the Management of STEMI in India'.

1.1. Historical background

Nearly 3 million STEMI are estimated to occur in India per year. First attempt towards development of STEMI management protocols in India was done in the year 2011.¹ Recently a consensus statement has been published jointly by STEMI-INDIA, CSI and Association of Physicians of India (API).² The concept of "spoke and hub" has been highlighted in this document, which is based on the distance of the place from where the patient is commuting and the location of the primary, secondary or tertiary care centres. But since the whole concept revolved around few locations in India which were having advantages in terms of logistics and infrastructure, there have been challenges in its universal application in our diversified country.

1.2. Magnitude of the problem

As per World Health Organisation (WHO) data, the Coronary Artery Disease (CAD) prevalence continues to rise in India with rapid 'epidemiological transition'. It has already surpassed communicable diseases as the major cause of mortality in India. It has been projected that between 1990 and 2020, there will be

117% and 105% rise in mortality from CAD in men and women respectively in India.³

The rising incidence of CAD in young Indians is of particular concern. The incidence of CAD in young population in Western countries is 2–5%, whereas it is 11–16% in Asian Indians.⁴ In a study of ethnic differences in patients with Myocardial Infarction (MI) in England, it was observed that young Indians had ten times more risk of developing MI as compared to the white population.⁵ We have old as well as recent data, especially the registries from different regions of India viz. Himachal Pradesh from North, Assam from North East (NE), Kerala and Chennai from South and multi-city, multi-hospital CREATE Registry.^{6–9} The inferences are quite alarming: patients of acute coronary syndrome (ACS) in India have a higher proportion of STEMI as compared to developed countries. Most of these patients are from poor socio-economic status, have delayed presentation, are less likely to get evidence-based treatments and have greater 30-day mortality. Reducing the time to reach hospital and offering affordable optimal therapy could reduce morbidity and mortality.

1.3. Challenges in management of STEMI in India

Economic and geographic diversities along with infrastructural differences make the management of STEMI in India both challenging and discrepant. If this is combined with the high volume of STEMI patients, a very serious picture emerges.

India is labelled as upper low income economy country with a small section of society in the upper socio-economic strata, 18% of the population is in the middle income group category and the rest are in the low or very low income category. It has six metro cities and more than thirty big cities, mostly state capitals, which have world class healthcare facilities. But a vast majority of population lives in villages and smaller towns where only basic primary healthcare is available. Besides, there are many big and small townships, located in the hilly areas, on the sea sides, deltas or in deserts. Infrastructures especially transport systems and hospitals with modern facilities are far from optimal in these remote townships.

The health care in India is the reflection of mixed economy. Only 20% of the population has the affordability to take proper medical care either with government supported schemes or private insurance. The total spending on healthcare is around 4.6% of GDP in India which is much lesser than countries like USA (17.1%), UK (9.1%) and China (5.5%). The government contribution to healthcare is further lower i.e., around 2% of GDP and even this spending is utilized mainly for primary healthcare and communicable diseases. In this scenario, it is not difficult to understand the challenges in delivery of modern evidence based management of STEMI to the majority of the population.³

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