

# High Prevalence of Metabolic Factors in Both Young and Old Patients with Acute Coronary Syndrome - Interim Results of Metabolic Risk Factors in First ACS Study (Merifacs)

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**Disclosure:** The authors have declared no conflicts of interest.

**Acknowledgements:** The authors would like to thank the KIMS Foundation Research Centre.

**Keywords:** Acute coronary syndrome (ACS), BMI, India, metabolic syndrome, risk factors.

**Citation:** EMJ Cardiol. 2020;DOI/10.33590/emjcardiol/2008311

## BACKGROUND AND AIMS

Prevalence of coronary artery disease in developing countries is increasing.<sup>1</sup> Acute coronary syndrome (ACS) in India is known to involve a younger population and management has specific geographical challenges.<sup>2</sup> The risk-factor profile may be varied in different geographical areas.<sup>3</sup> This is an ongoing prospective study of ACS patients across India, with the aim of assessing relative prevalence of conventional (CRF) and metabolic risk factors (MRF).

## MATERIALS AND METHODS

The study recruited consecutive consenting patients >18 years with the diagnosis of first ACS.

Patients were treated as per standard of care. Data on demographic profile, socioeconomic status, risk factors, and in-hospital treatment were captured. CRF were active smoking, hypertension, diabetes, and high low-density lipoprotein levels. MRF were above normal values of BMI, waist-hip ratio, HbA1c, S-triglycerides, and low high-density lipoprotein levels. Statistical analysis was performed using SPSS software.

## RESULTS

There were 500 patients from 13 centres across India. There were 353 (70.6%) males and 147 (29.4%) females. The mean age of the cohort was 55±11 years. Distribution of ST-elevated myocardial infarction and non-ST-elevated myocardial infarction was 86.0% versus 14.0%, respectively. Socioeconomic classification was distributed across low (70.6%), middle (27.0%), and high (2.4%) income groups. The percentage of patients with abnormal metabolic factors was 53.6% with a high BMI, 68.2% with a high waist-hip ratio, 63.6% with low high-density lipoprotein levels, 38.0% with high HbA1c, and 26.8% with high triglycerides. The percentage of patients with conventional risk factors was 48.4% with hypertension, 28.4% with ongoing smoking, 47.2% with high low-density lipoprotein levels, and 41.1% with diabetes. 75 patients (15%) had MRF but not CRF. **Table 1** compares the prevalence of single versus multiple MRF and CRF in this cohort.

## CONCLUSION

ACS in India occurs at a younger age than in many other countries. There is a high prevalence of MRF in these patients which exceeds the prevalence of CRF. ACS patients without any CRF may have MRF. Prevention strategies for ACS should also focus on correction of metabolic factors.

## References

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**Table 1: Prevalence of MRF and CRF in first ACS cohort.**

<b>Number of risk factors</b>	<b>MRF number</b>	<b>CRF number</b>	<b>p value</b>
0	8 (1.6%)	46 (9.2%)	<0.001
1	492 (98.4%)	454 (90.8%)	<0.001
2	411 (82.2%)	289 (57.8%)	<0.001
3	245 (49.0%)	197 (21.4%)	<0.001
4	105 (21.0%)	10 (2.0%)	<0.001

ACS: acute coronary syndrome; CRF: conventional risk factors; MRF: metabolic risk factors.