Characteristics and Mortality Ratio of Prehospital Chest Pain Patients in India

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Abstract

OBJECTIVES: India has the world's largest burden of cardiovascular diseases (CVD); however, no studies to date have examined Indian patients with cardiac-related complaints in the prehospital setting. The Emergency Management and Research Institute (EMRI) launched in 2005 to provide prehospital care to all 76 million residents in the state of Andhra Pradesh, India. This study aims to describe patients transported by EMRI with possible cardiac-related emergencies. METHODS: In this prospective cohort study, all patients transported by EMRI for the chief complaints of "cardiac" or "chest pain" over seven continuous days in July 2009 were included. Patients who were not found at the scene, refused service, or denied chest pain were excluded. Using a standardized questionnaire, patient demographic and clinical data were collected by phone in real-time from prehospital care providers. Follow-up information was collected at 48 hours, 14 days and 30 days. RESULTS: 585 patients were enrolled and the follow-up rate was 84.3% at 30 days. The mean patient age was 48.5 years (17.6, SD) and 61% were male. Seventy-four percent of patients were from rural or tribal areas, 90% were from lower socioeconomic strata, and 56% had CVD risk factors. Average call-to scene time was 20.6 minutes (15.5, SD) and scene-to-hospital time was 30.8 minutes (17.2, SD). Mortality ratios prior to hospital arrival, at 48 hours, and at 30 days were 13.8%, 19.3%, and 23.2%, respectively. Male gender (p<0.0001), older age (p=0.0005) and smoking history (p=0.026) were significant independent predictors of 30-day mortality. CONCLUSIONS: This initial study of chest pain patients in the prehospital setting in India has revealed alarming early mortality ratios. Given the prevalence of CVD risk factors and significant prehospital mortality, educating the at-risk population and earlier medical intervention could improve survival.

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