Mortality from Thermal Burns in Patients Using EMS in India

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Abstract

Objectives: Characterize the demographics, management, and outcomes of patients using emergency medical services (EMS) for thermal burns in India.

Methods: A prospective observational study of patients using EMS for thermal burns across five Indian states over four months in 2015.

Results: We enrolled 439 patients, 30-day follow-up rate 85.9%. The median age was 31 years; 50.3% (N = 221) lived in poverty; and 65.6% (N = 288) were women. EMS transported most patients within two hours (94.3%; N = 395). Overall 30-day mortality was 64.5%, but was 90.2% in women with self-inflicted burns. In total, 45.6% (N = 200) reported self-inflicted burns. Intentional burns involved a median total body surface area (TBSA) of 80%, versus 35% in accidental burns. Inhalation injury (OR 6.7; 95% CI 3.1, 14.5), intentionality (OR 6.6; 95% CI 3.6, 12.2), economic status (OR 2.6; 95% CI 1.2, 6.0), and gender (OR 2.3; 95% CI 1.3, 4.0) predicted mortality by multivariate regression.

Conclusions: EMS connects critically burned patients to needed care in India. Mortality from thermal burns remains exceedingly high, with women disproportionally suffering self-inflicted burns and higher mortality. Burn prevention in India must recognize the prevalence and severity of self-inflicted burns and the need for mental health and gender-based violence supportive services.