

ORAL PRESENTATION

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Epidemiology of illnesses encountered during a marathon race – an EMS perspective

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From EMCON 2014: International Conference on Emergency Medicine; 16th Annual Conference by the Society for Emergency Medicine in India (SEMI)

Mumbai, India. 6-9 November 2014

Background and objectives

There is a dearth of good data from the Emergency Medical Services (EMS) regarding emergencies during a Marathon race. This study aims to document the various emergencies that can occur during the course of a marathon in India. We hope that this study will enable planners to create a database and to improve emergency preparedness for future such events.

Methods

Study population

A total of 10,000 runners in the age group of 18-80 years, participated in the full (42.2 km) marathon, half (21.1 km) marathon and the 5 K run. Both trained and untrained runners took part in the race.

Location

Southern Indian city of Hyderabad, on the 24th of August from 5:00 AM to 1: 00 PM.

Race conditions

Urban and semi-urban parts of the city with both paved and un-paved roads, maximum recorded temperature during the race was 35° Celsius.

A prospective descriptive epidemiological analysis of race data of runners presenting with emergencies was done using a standardized patient data collection form given to medical aid providers. Triage was done according to Canadian triage and acuity scale.

Results

Of 10,000 runners, 252 runners required medical assistance during the course of the race.

Of all the patients presenting to EMS 248 were Triage priority 3 or 4 requiring urgent or less urgent care

- Exercise related musculoskeletal injuries accounted for 200 (79%) of the total cases
- Dehydration related cramps accounted for 33 (13%) of the cases requiring oral or IV fluid rehydration
- Terrain related blisters and foot injuries – 9 (3.5%) patients
- Vomiting - 4 (1.5%)

A total of 4 patients were triage priority 2 requiring Emergent care – Transported by EMS to the nearest tertiary care hospital.

A 24 year old with symptomatic hypoglycaemia, requiring Dextrose infusion

A 45 year old male with Altered mental status secondary to Heat exhaustion and hypotension requiring IV fluid resuscitation

A 70 year old male with Hypotension and dizziness requiring IV fluid resuscitation

A 23 year old girl who collapsed with hypotension and heat exhaustion requiring IV fluid resuscitation.

Conclusion

Long-distance running can be a safe and benign sport; however there were serious heat related illnesses requiring hospitalization of runners in this study. A well prepared EMS system is paramount to hosting a marathon in India due to extreme temperatures and mass participation.

Note

Consent was taken from the four patients who were triaged as priority 2 and received in-hospital care.

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Published: 22 April 2015

doi:10.1186/1865-1380-8-S1-O3

Cite this article as: Fatima et al.: Epidemiology of illnesses encountered during a marathon race – an EMS perspective. *International Journal of Emergency Medicine* 2015 **8**(Suppl 1):O3.

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