

Brief communication

The Great Ethiopian Run: Incidence of injury; a descriptive study

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Abstract

We measured the incidence of illness and injury during the Great Ethiopian Run, the first mass participation running event to be held in Ethiopia. Overall incidence of minor injury was 2.4%; 0.25% of participants were taken to hospital but no patient required overnight admission. The principal diagnoses were heat stroke (0.14%) and soft tissue injuries (0.09%). We recommend starting the run earlier next year to diminish the risk of heat stroke. [*Ethiop.J.Health Dev.* 2002;16(2):233-234]

Background

Over the past 30 years, mass participation sporting events have become increasingly popular worldwide. Such events have positive health benefits, but concern has been raised about negative health consequences, in relation both to participants and local health services, and efforts have been made to anticipate and provide for such eventualities¹. There are few published studies of medical problems associated with road races, but two studies (from Canada² and Australia³) are relevant. Both cover 10 kilometer races, and the first describes the incidence of heat injuries, while the second that of more general medical problems.

The first Great Ethiopian Run was held in Addis Ababa in November 2001. The 10 kilometer road event was held in the late morning, when maximum temperatures reached 25 degrees Centigrade.

The objectives of this descriptive study were:-

- To measure the incidence of illness and injury requiring medical assistance and hospitalization; and

- To determine the outcome of hospitalizations.

Methods

Records of the Ethiopian Red Cross Society (ERCS) were used to establish the number of injuries and illnesses requiring medical assistance. Age and gender of participants treated and transported to hospital was recorded. Denominator statistics were taken from the race registration database maintained by African Lakes Co.

Accident and emergency department records at Tikur Anbessa, Zewditu and Menelik hospitals were examined, and the doctor attending on the day of the run was interviewed. In each case, the principal diagnosis and outcome (admission, discharge or death) of each participant taken to hospital was established. Information on diagnosis and outcome remained anonymous at all times, and in accordance with international recommendations, individual consent was not sought from participants.

Results

Two hundred twenty seven participants sought medical assistance from the ERCS. Full details were registered for 9380 runners, giving an overall incidence of minor illness and injury of 2.4%. When broken down by gender the incidence of minor illness and injury was 1.4% (95% CI 1.1 – 1.7%) among

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men and 7.3% (95% CI 6.0 - 8.6%) among women (Table 1). The difference in incidence between men and women was statistically significant (difference 5.9%, 95% CI 4.6 - 7.2%). The principal problems attended by ERCS volunteers were abrasions and exhaustion.

Twenty three participants (11 men and 12 women) were taken to hospital, 8 to Menelik Hospital, 6 to Tikur Anbessa Hospital, and 9 to Zewditu Hospital. The principal diagnoses were heat stroke (13 participants, 0.14%) and soft tissue injury (8 participants, 0.09%). No patient required overnight admission. No patient died.

Table 1: Incidence of minor illness & injury and hospitalization among registered participants, by gender

| | Men (%) | Women (%) | Total (%) |
|----------------------------|------------|------------|------------|
| Race participants | 7799 (83) | 1581 (17) | 9380 (100) |
| Minor illnesses & injuries | 111 (1.4)* | 116 (7.3)* | 227 (2.4) |
| Taken to hospital | 11 (0.14)* | 12 (0.76)* | 23 (0.25) |

* Significant difference between men and women

Discussion

The first Great Ethiopian Run was accomplished with a low rate of injuries and illness. The incidence of heat injury (0.14%) is considerably lower than that recorded (0.90%) in two Canadian 10 kilometer runs². The authors of this paper suggest that heat injury is associated with inexperience of 10k races and lack of heat acclimatization in runs held in early summer after a cold Canadian winter. Although many participants in the Great Ethiopian Run were race novices, most would have been at least partially acclimatized to running in heat. Nevertheless, since heat stroke was the principal diagnosis among those taken to hospital, we recommend that the run is started earlier next year so that most participants have finished by 10am.

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References

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2. Hughson RL, Green HJ, Houston ME, Thomson JA, MacLean DR, Sutton JR. Heat injuries in Canadian mass participation runs. *Canadian Medical Association Journal*. 1980;122(10):1141-2.
3. Sutton J, Coleman MJ, Millar AP, Lazarus L, Russo P. The medical problems of mass participation in athletic competition. The "City-to-Surf" race. *Medical Journal of Australia*. 1972;2(3):127-33.

Erratum

In the article entitled "Household illness prevalence and its determinants in the under - five children". *Ethiop J Health Dev* 2001;15(3)173-178 on page 174 figure 1 was omitted during printing. The figure is shown below.

Figure 1: Frequency of symptoms of diseases in the underfives.

