

Incidence and predictors of severe altitude illness symptoms in Mt. Kilimanjaro hikers; a prospective cohort study

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Background

The objectives of this study in Mt. Kilimanjaro hikers were to determine the incidence and predictors of severe altitude illness symptoms, of summit success and the measures taken when altitude illness occurs.

Methods

In this prospective observational cohort study participants had to complete a questionnaire when starting and another immediately after descent. A multivariate logistic regression was performed to study the relations between the variables.

Results

A total of 1237 recreational hikers were included. Nine percent of the hikers had at least one severe symptom and one percent was hospitalized due to severe altitude illness. A history of severe altitude illness, young age, summit failure and lack of clear advice were independent predictors of the development of severe symptoms. Uhuru peak was reached by 87.9% of the hikers. Absence of severe symptoms, acetazolamide prophylaxis, climbing higher in daytime, young age and climbing in more days predicted summit success. The majority climbed further despite the presence of mild or severe symptoms. Not climbing further with mild symptoms was associated with a lower incidence of severe symptoms.

Conclusions

The incidence of severe altitude illness symptoms in Mt. Kilimanjaro hikers was high and behavior in case of symptoms was not appropriate. Therefore, all future hikers should receive clear advice on the mild and severe symptoms of altitude illness and what to do in case they occur. In addition, they should be informed on the measures which improved summit success.