

Malaria imported in Sweden 1995-2015: a nationwide retrospective study

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Background

Malaria is a potentially severe and fatal disease. Prompt diagnosis and adequate treatment are of outmost importance for a favourable outcome. The aim of this study was to assess factors in the clinical presentation and management that predict the outcome of imported malaria.

Method

Nationwide retrospective chart review of malaria episodes diagnosed in Sweden 1995-2015. Episodes were identified in the National Surveillance Database at the Public Health Agency of Sweden.

Results

Of the notified episodes, 2769 (89.4%) were reviewed and 2653 included in the primary assessment. Initiation of antimalarial treatment was delayed ≥ 1 day after health care presentation in 517/2653 (19.5%). Severe P. falciparum was significantly more common among patients with delay to treatment, especially in travellers from non-endemic countries where 25/107 (23.4%) had severe malaria compared to 59/509 (11.6%) without healthcare delay.

Severe P. falciparum was more common in children <5 years and adults >60, seen in 10/49 (20.4%) and 22/84 (26.2%), respectively. Furthermore, severe P. falciparum was more common in patients from non-endemic countries, 87/632 (13.8%) compared to 66/924 (7.1%) in patients born in endemic countries.

Case fatality rate was 0.15% (4/2653) of all episodes. All 4 were Swedish born males infected with P. falciparum in Sub-Saharan Africa.

Conclusion

Death due to malaria was rare in Sweden. However, we found a high occurrence of health care delay that in P. falciparum was associated with severe disease. Continuous efforts are needed to reduce time from healthcare presentation to diagnosis and treatment to avoid development of severe malaria.