107/A

The clinico-epidemiological and diagnostic patterns of malaria in transition – experience from Sri Lanka 2015-2016

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Sri Lanka, previously recognized to be an endemic territory for malaria, has now reached the prevention of reintroduction phase. This has led to a transition in the clinic-epidemiological characteristics, patterns of diagnosis and parasitic species causing malaria in the country. When a malaria positive patient was reported to the Anti Malaria Campaign Headquarters during the years 2015 and 2016, the patient was visited and clinical and epidemiological data relevant to the infection was collected using a pretested, interviewer administered questionnaire. Information was also collected from the Bed Head Ticket. The objective of this study was to determine the changes in clinical presentation and epidemiological patterns, which will be useful in improving malaria surveillance. A total of 77 imported malaria cases were reported during this period. Over 86% were males 21-50 years of age. *Plasmodium falciparum* (n=35) was the predominant species detected, followed by *P. vivax* (n=33),*P.ovale* (n=7) and *P.malariae* (n= 1), and,in addition, the only case of *P.knowlesi* reported from Sri Lanka. The majority of infections were diagnosed in the private sector (31/77; 40%) and passive case detection due to clinicians' referral was the main mode of diagnosis (55/77; 71.4%). Seven cases were identified by active case detection amongst high-risk groups while eight cases were detected accidentally on examination of a blood picture without a referral for a malaria test. Fever with chills and rigors was the most common presentation and fifteen patients developed severe malaria. Most of the infections were diagnosed in Sri Lankans (70.1%, n=54) arriving from African destinations (38/54; 70.3%). Amongst foreign nationals, the majority were Indians (14/23; 60.9%). The majority of cases were residents of the Western Province (62%). The percentage of cases diagnosed in the Western Province was 74%, while at least one case was reported from seven out of the other eight Provinces. The time taken for diagnosis ranged from 0-54 days (this includes the duration from the day of onset of symptom till diagnosis in patients who developed symptoms after disembarkation in Sri Lanka or duration from date of arrival to diagnosis in patients whose symptoms started abroad) with a mean of 7.42 (±8.67) days. Due to the current rarity of malaria in Sri Lanka, it is not considered in the differential diagnosis of patients presenting with fever, resulting in a delay in diagnosis. The patients were treated according to the national malaria treatment guidelines. Enhanced surveillance (both active and passive) and high vigilance, especially in the Western Province,are very important in keeping Sri Lanka malaria free.

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