

3 ZOOBOTIC AND VECTOR-BORNE DISEASES

Malaria

Alert: malaria season

The malaria season in southern Africa is from September to May each year, and an increase in both local (from malaria-endemic areas in South Africa) and imported (from other malaria-endemic countries) cases can be expected over the upcoming Easter holiday period. Malaria is endemic in three South African provinces: Limpopo, Mpumalanga, and north-eastern KwaZulu-Natal (KZN). Travellers to malaria-endemic areas within South Africa or other malaria-endemic countries (notably Mozambique) need to ensure personal protection against mosquito bites. Where chemoprophylaxis is indicated, three similarly effective chemoprophylactic agents are recommended for Southern Africa: Mefloquine (Lariam[®], Mefliam[®]), doxycycline, and atovaquone-proguanil (Malanil[®], Numal[®]); the choice of agent must be individualised. For advice on preventive measures, access the following link: http://www.doh.gov.za/docs/policy/2011/malaria_prevention.pdf.

Odyssean malaria, Gauteng Province

Odyssean malaria refers to the acquisition of malaria outside an endemic area, from the bite of an infective mosquito inadvertently translocated from an endemic area. Vector mosquitoes can be transported out of their normal habitats by a variety of means (including aircraft, motor vehicles, and ships).

Two unlinked odyssean malaria cases in Gauteng Province were reported in the December 2014 and January 2015 NICD communiques respectively. During March 2015, two clusters of odyssean malaria were identified, one with four epidemiologically-linked cases and another with six epidemiologically-linked cases. Investigations into the two clusters are currently underway; however, preliminary investigation findings indicate that none of the case-patients in either cluster had travelled outside Gauteng Province in the preceding months. Malaria must be considered in the differential diagnosis of acute febrile illness in returning travellers. In addition, healthcare workers need to maintain a high index of suspicion for malaria in all patients presenting with fever $>38^{\circ}\text{C}$ and headache with flu-like illness, or fever $>38^{\circ}\text{C}$ with impaired consciousness, where no obvious cause is evident and in whom no recent history of travel to a malaria risk area is forthcoming.

Diagnostic tests for malaria should be done urgently, since prompt and appropriate management is critical to improving patient outcomes. Delays in diagnosis, misdiagnosis (most commonly as influenza), and delayed treatment are the most common factors associated with adverse outcomes. Healthcare workers, especially those in non-endemic areas, must ensure that any case of malaria is notified.

The South African national guidelines recommend the use of artemether–lumefantrine (Coartem[®]) or quinine plus doxycycline/clindamycin for uncomplicated falciparum malaria. Severe falciparum malaria is treated using quinine plus doxycycline/clindamycin or intravenous artesunate where available. An initial loading dose of 20 mg/kg of quinine is required for all cases of severe malaria to rapidly reach a therapeutic level. Chloroquine and sulphadoxine-pyrimethamine are not to be used in the treatment of falciparum malaria due to high-level resistance. Non-falciparum malarial infections are less common in sub-Saharan Africa; artemether-lumefantrine or quinine as above can be used for treatment of acute non-falciparum malarial illness. Chloroquine should only be used if there is reliable laboratory confirmation of non-falciparum species. The addition of primaquine to the above initial treatment is indicated for *Plasmodium ovale* or *P. vivax* infections to prevent relapse.

Residents should minimise potential mosquito breeding sites by ensuring that no temporary bodies of water remain in their vicinity.

An update on recommendations for the treatment and prevention of malaria for the 2015 season in South Africa was published in the March 2015 issue of the South African Medical Journal, and is available at: www.samj.org.za/index.php/samj/article/download/9407/6579.

Source: Division of Public Health Surveillance and Response, NICD-NHLS