

Malaria in the ADF, January – June 2002

THE REPORTING PERIOD January to June 2002 is remarkable for the fact that there were only 12 notifications of malaria to the Central Malaria Register (CMR) at the Australian Army Malaria Institute (AMI). This is despite the ongoing strong presence of the Australian Defence Force in East Timor, as well as smaller operations in Bougainville, Malaysia and the Solomon Islands.

There are several possible reasons for the apparent reduction in malaria cases in ADF personnel. First and foremost would be the impact that preventive medicine elements have had in East Timor, as well as improved living and accommodation standards. Secondly, the mefloquine prophylaxis trials run during the deployments of 4 RAR and 2 RAR, from April 2001 to May 2002, are likely to have had a positive impact on compliance with malaria chemoprophylaxis. This is commonly known as the “trial effect”. Finally, it is possible that CMR notifications underrepresent the actual number of malaria cases in the ADF. In an audit of the CMR, Captain Nathan Elmes, AMI, has discovered a number of unreported clinical episodes. AMI is considering options for simplifying the process of notification of malaria cases and giving direct feedback to the referrer to improve compliance with reporting.

The breakdown by malaria species and probable country of origin is detailed in the table below. East Timor remains the greatest source of malaria for the ADF. Specific features of the malaria cases indicate that the more commonly acquired *P. vivax* is likely to present on return to Australia (RTA), whereas infection with the potentially fatal *P. falciparum*, either alone or as a mixed infection with *P. vivax*, is more likely to present in the area of operations. This indicates that the clinical symptoms of initial infection with *P. vivax* are readily suppressed by ADF chemoprophylaxis.¹

Malaria infection in ADF personnel reported from January to June 2002, categorised by probable source of infection

	<i>P. falciparum</i>	<i>P. vivax</i>	<i>P. malariae</i>
East Timor	0	6	1 (in AO)
PNG (Bougainville)	0	1	0
Solomon Islands	1 (in AO)	1 (in AO)	1 (in AO)
Unknown	0	1	0
Totals	1	9	2

AO: area of operation. All other cases diagnosed on return to Australia.

Malaria reporting

The Central Malaria Register (CMR) can only be as good as the information it receives, and registry data may well underrepresent actual malaria infections in the ADF. All Health Service personnel are encouraged to notify the CMR promptly when a malaria casualty is detected.

Notification is primarily via PM40 forms as directed in HD215. These forms can be forwarded by mail (AMI, Gallipoli Barracks, ENOGERA, 4051) or fax (07 3332 4800). For simplification, only thick and thin films, with a PM12, need accompany the PM40. A blood sample is no longer routinely required and the amended HD is pending. The PM12 results will be available within 24 hours and a hard copy returned to the referring unit within 5 days.

To encourage early reporting, informal notifications preceding a PM40 can be made by telephone (07 3332 4836 or 0409 343 226) or by e-mail (sonya.bennett@defence.gov.au). Notifications are stored on a secure database and PM40 forms are retained at AMI.

The *P. vivax* infections occurring on return to Australia, while known as “first clinical episodes”, are theoretically relapses. The parasite emerges from the latent hypnozoite stage in the liver to produce clinical infection. It is not known what triggers this phenomenon and the time to first clinical episode after RTA is highly variable, with 121 days being the mean time to relapse with *P. vivax* from East Timor.² In this reporting period there was a case, managed by Captain Isaac Seidl (RMO 5/7 RAR), where the time to relapse after return to Australia from service in East Timor was 679 days. This compares with the previous record of 505 days.

All three ADF members infected while deployed to the Solomon Islands developed malaria while in that country. Although the members were taking doxycycline for prophylaxis, their compliance with the medication and the bioavailability of the drug is unknown. The member presenting with a mixed *P. falciparum*/*P. vivax* infection had also served in East Timor six months earlier and it is entirely possible that the *P. vivax* parasite was contracted in East Timor.

Lieutenant Commander Sonya Bennett

Officer Commanding, Clinical Field Section, Army Malaria Institute

1. Defence Health Service, Health Directive 215, dated 15 December 2000.
2. Kitchener SJ. Presentation to the DHSRA-Q Conference, July 2001.

ADF Health is available on the Internet:

<http://www.defence.gov.au/dpe/dhs/main/infocentre/publications/journals/i-journals.htm>