World cup fever

Bridget E Barber, Krispin M Hajkowicz, Vicki L Krause, Kevin G Freeman and Bart J Currie

To the Editor: We report a case of measles in a 24-year-old man who returned from the Fédération Internationale de Football Association (FIFA) World Cup in South Africa in July 2010. Despite Australian health alerts about measles in South Africa,[1] the patient had received no pretravel medical advice or vaccinations.

Six days after returning home to the Northern Territory, the patient developed fever, headache and myalgia. The following day he developed vomiting, diarrhoea, and productive cough, with a widespread rash appearing the subsequent day. He visited two general practitioners, was prescribed doxycycline and then admitted to hospital on Day 6 of his illness.

On examination, his temperature was 38.9ºC; pulse, 112 beats per minute; blood pressure, 133/72 mmHg; and oxygen saturation, 96% on room air. He had conjunctivitis, a widespread blanching maculopapular rash involving his face, trunk, limbs, hands and feet (Box) and cervical lymphadenopathy. He had bilateral basal lung crackles and tender hepatomegaly. Investigations showed thrombocytopenia (platelet count, 148×10^9/L; reference range, 150–450×10^9/L); hyponatraemia (sodium concentration, 131 mmol/L; reference range, 132–142 mmol/L); and abnormal liver function test results (alanine transaminase concentration, 417 U/L [reference range, < 40 U/L]; alkaline phosphatase concentration, 236 U/L [reference range, 39–117 U/L]). His chest x-ray was normal. The following day, measles virus RNA was detected from a throat swab, and the patient was put into respiratory isolation and therapy with doxycycline ceased. He made a full recovery. The patient reported receiving childhood vaccinations, and while he thought he may have received one measles, mumps and rubella vaccination, he had not had two. Follow-up was required for 84 identified contacts, with no measles cases subsequently notified in the NT.

The FIFA World Cup is the world's largest single-sport event, with an attendance this year of over 3 million people. Mass gatherings may be associated with outbreaks of communicable diseases such as meningococcal disease, measles and pandemic (H1N1) 2009 influenza, in addition to an increased risk of sexually transmitted diseases.[2] These risks should be considered when seeing patients who have travelled to such events, in addition to country-specific health risks.

The patient's widespread maculopapular blanching rash

Recent data from the GeoSentinal surveillance network showed that a systemic febrile illness was the most common presenting syndrome among travellers returning from South Africa. Most of these cases of illness (54.5%) were due to spotted fever group rickettsiosis.[3] The risk of acquiring rickettsiosis increases among travellers visiting game parks, with an incidence of African tick bite fever (*Rickettsia africae*) among short-term safari tourists of 4.0%–5.3%.[4]

Measles has rarely been reported in travellers returning from South Africa,[2] but the country is in the midst of a measles epidemic, with 17 354 confirmed cases between January 2009 and 12 August 2010.[5] Measles presents with fever, cough, rhinorrhoea and conjunctivitis, followed by a widespread rash. The incubation period is usually 7–10 days, but may be up to 18 days. The virus is highly infectious, from 5 days before to 4 days after the onset of rash. Young adults from non-endemic countries such as Australia are at particular risk, as they may only have had one childhood vaccination for measles, with consequent inadequate protection.

Although measles has been eliminated in Australia,[6] sporadic outbreaks continue to occur,[7] and travellers returning from overseas create an ongoing potential for the re-establishment of endemic measles. Given the public health implications of a delayed diagnosis, doctors must be alert to possible cases of measles in travellers returning from endemic countries.

Bridget E Barber, Infectious Diseases Registrar[1]
Krispin M Hajkowicz, Infectious Diseases Physician[1]
Vicki L Krause, Director[2]
Kevin G Freeman, Scientist-In-Charge, Serology and Molecular Biology[1]
Bart J Currie, Head, Infectious Diseases Department[1]
1 Royal Darwin Hospital, Darwin, NT.
2 Centre for Disease Control, Department of Health and Families, Northern Territory Government, Darwin, NT.
bridget.barber@menzies.edu.au

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