

2 ZOO NOTIC DISEASES

Rabies

In South Africa, a total of four cases of human rabies has been laboratory confirmed from January 2014 to date. These cases originated from Eastern Cape (n=2), North West (n=1) and Limpopo (n=1) provinces. In addition to the laboratory-confirmed cases, a total of four clinical rabies cases has also been documented for 2014 to date, reported from Limpopo (n=1), Mpumalanga (n=2) and Eastern Cape (n=1) provinces. These case-patients presented with a history of exposure to a dog and clinically-compatible disease suggestive of rabies, but rabies disease could not be confirmed by laboratory testing for a variety of reasons.

Eastern Cape Province

Two rabies cases have been reported from this province since last month's Communiqué.

An 11-year-old male from Qokolweni (a rural village near Mthatha) was scratched by a dog in May 2014, but no medical care was sought. The child was admitted to a Mthatha hospital in mid-June with fever, headache and confusion. His condition progressively deteriorated, with onset of symptoms including delusions, delirium, vomiting, hydrophobia and hypersalivation; he died the day after admission. Fluorescent antibody testing on a post-mortem brain sample tested positive for the presence of rabies virus antigen.

A three-year-old child was admitted to a Mthatha hospital for suspected rabies, and died a day later. He was reportedly bitten by a dog in May 2014, and was taken to a healthcare facility by his caregivers. Although he received a dose of rabies vaccine, rabies immunoglobulin was not administered; the child did receive the scheduled second and third doses of vaccine but not the fourth dose. Rabies IgG antibodies were detectable in a single cerebrospinal fluid specimen, but rabies RT-PCR tested negative on the same specimen. No further specimens were available for rabies testing.

North West Province: outbreak alert

The probable rabies case reported in the June 2014 issue of the Communiqué (a nine-year-old child from Mogwase town, near Rustenburg, who was bitten by a neighbour's dog), has since been confirmed through rabies fluorescent antibody testing on a post-mortem brain specimen. In addition, rabies IgG antibodies were detected in an ante-mortem cerebrospinal fluid specimen.

The current increase of dog rabies cases in North West Province is extremely concerning, since a rise

in dog cases heralds the appearance of disease in the human population. Since 1981, only six human rabies cases (including the case mentioned above) have been reported from this province. This recent case is noteworthy, since it is the first human case associated with a dog exposure ever to be reported in the province. Previous human rabies cases in this province were associated with the region's endemic wildlife rabies cycle, namely mongoose (n=2) and jackal (n=1) exposures. In 2006 rabies was confirmed in an elderly male who had been scratched by a bat in the Rustenburg surrounds and was infected with the Duvenhage lyssavirus variant ('bat rabies'). The upsurge in animal rabies cases in the province began almost two years ago, and has affected Brits, Rustenburg, the Moses Kutane local municipality (which includes the Pilanesberg Game Reserve and Sun City Resort), Zeerust and Potchefstroom areas. Rabies has been confirmed in dogs, jackal, livestock, and yellow mongoose. Recently, rabies was also confirmed in a slender mongoose found in Potchefstroom town. Dog vaccination and community awareness campaigns have been initiated in response to the situation.

Rabies acquired in Angola

A 51-year-old male South African national living and working in Luanda was reportedly bitten some time ago by a stray dog he adopted whilst living there. He sustained seemingly minor scratches and no medical care was sought. In July 2014, he became ill and was evacuated to a Johannesburg hospital for medical care. The patient presented with nonspecific symptoms which rapidly progressed to agitation and apparent hydrophobia. Rabies immunoglobulin and vaccine was administered upon admission to hospital, but therapy was discontinued since neither vaccine nor immunoglobulin are indicated for the treatment of clinical rabies disease. A total of six saliva specimens was collected over three days, three of which tested positive by rabies RT-PCR. At the time of this report the patient remains alive but critically ill on life support.

Pre-exposure prophylaxis for rabies (Pre-PEP) is strongly recommended for expatriates working in rabies risk areas, particularly where access to post-exposure prophylaxis is limited, since it obviates the need for scarce rabies immunoglobulin. The recommended Pre-PEP regimen is one dose of vaccine given on days 0, 7 and 21 (i.e. three doses in total). Post-exposure vaccine boosters should be given on days 0 and 3 in the event of a potential

rabies exposure. Rabies immunoglobulin must not be given to persons who have previously received a rabies vaccine course (whether for pre- or post-exposure prophylaxis), regardless of the category of exposure.

Health professionals and members of the public can access more information on rabies through the NICD website: www.nicd.ac.za.

Source: Centre for Emerging and Zoonotic Diseases and Division of Public Health Surveillance and Response, NICD-NHLS