

4 ZOO NOTIC DISEASES

Rabies

Rabies is endemic in South Africa and certain areas of the country are highly affected by rabies circulating in domestic dogs. At present, these areas include: Bushbuck Ridge and Mbombela surrounds in Mpumalanga Province; eThekweni and surrounds in KwaZulu-Natal Province; Mthatha and Queenstown areas in Eastern Cape Province; Ladybrand and surrounds in Free State Province. There has also been a recent increase in dog rabies cases in North West Province. It is important, however, to note that rabies is not restricted to these hotspots.

Human rabies cases in South Africa are mostly associated with dog exposures. A nine-year-old boy and his five-year-old brother were attacked by a neighbour's dog in Mogwase town (near Rustenburg), located in north-eastern North West Province on 06 April 2014. The boys were promptly taken to a healthcare facility after the attack, where rabies vaccination and rabies immunoglobulin was administered to the five-year-old boy. His older brother, however, did not receive any rabies post-exposure prophylaxis (PEP) since the healthcare professional considered his wounds to be superficial. The owner of the dog implicated in the attack tried to contain the animal and kill it, but was bitten in the process sustaining a finger laceration. The man reportedly did not seek any medical attention after the incident, and died three weeks after the incident. No report of his clinical condition prior to death is available at this time. The older brother started experiencing fever, headaches, confusion and agitation on 26 May 2014. He was admitted to a local hospital in Rustenburg on 02 June 2014, and died six days later. During hospitalisation a cerebrospinal fluid specimen and two saliva specimens were collected and submitted for laboratory investigation. Rabies reverse transcription PCR tested repeatedly negative on these specimens. Rabies virus specific antibodies were measured in the cerebrospinal fluid specimen, and although IgM tested negative, IgG was positive at a low titre. The latter finding supports the clinical diagnosis of rabies in this patient. A post-mortem brain specimen has been

requested to confirm the diagnosis. The five-year old brother who received rabies PEP remains well at this time.

The tragic outcome of this case serves as a stark reminder of the critical importance of appropriate application of rabies PEP, which can be a life-saving intervention. Even superficial wounds including nicks and scratches are deemed as exposures, albeit the need for rabies immunoglobulin in such cases may not be indicated (i.e. category 2 exposures). However, any injury, including a scratch, that draws blood constitutes a category 3 exposure and both rabies vaccine and rabies immunoglobulin are indicated. Community awareness of the risk of rabies following dog exposures remains low in most communities in South Africa, particularly in peri-urban/rural areas.

A total of three laboratory-confirmed human rabies cases has been recorded during 2014 in the country to date. These cases originated from Limpopo, Eastern Cape and North West provinces. In addition, three probable cases of human rabies have been reported from Limpopo (n=1) and Mpumalanga (n=2) provinces. These cases were clinically compatible with rabies, and a history of exposure to a dog/potentially rabid animal was noted; however, for numerous reasons laboratory confirmation was not possible.

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

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