ZOONOTIC AND VECTOR-BORNE DISEASES

An update on rabies in South Africa

Since the last report, two new cases of human rabies in South Africa have been identified. This includes one laboratory confirmed case and one probable case. To date, two human rabies cases have been laboratory confirmed in South Africa (including the case reported here). These cases were reported from Limpopo and KwaZulu-Natal provinces. In addition, three probable cases were reported (including one case reported here) from KwaZulu-Natal, Limpopo and Eastern Cape provinces.

Rabies was confirmed in a 9-year-old boy from Umbumbulu area, eThekwini, KwaZulu-Natal Province. The child fell ill during the first week of August, reportedly with flu-like symptoms including high fever and fatigue. The child later presented with anorexia, refusal of fluids and sleepiness. The child was also irritable, complaining of itchy feet, which he scratched profusely. He was subsequently admitted to a hospital. During hospitalisation, it was noted that the patient was confused and experiencing hallucinations. Saliva samples were submitted to the NICD for rabies RT-PCR and tested positive, confirming the diagnosis of rabies. The child died on 18 August. The exposure history of the child is not confirmed, but a neighbour's dog may have bitten the child two months before onset of illness. Reportedly, the animal died shortly thereafter but was disposed of and not submitted for investigation.

A probable rabies case was reported as a 12-year-old girl from Thohoyandou, Vhembe District, Limpopo Province. The patient had behavioural changes at school, was vomiting and had abdominal pain. She later became restless and had a reduced level of consciousness. She died on 22 July 2020, a day after hospital admission. Allegedly, a neighbour's dog scratched her but the circumstances were vague and the child never received rabies post-exposure prophylaxis. A blood sample submitted for the patient was not adequate for testing. Given the patient's clinical presentation and possible history of rabies exposure, the case was classified as a probable case of rabies as laboratory confirmation was not possible.

Information regarding rabies, vaccination and collection of specimens for laboratory testing is available on the NICD website: www.nicd.ac.za

Article source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; januszp@nicd.ac.za

INTERNATIONAL OUTBREAKS OF IMPORTANCE

A description of a COVID-19 cluster in repatriated South African citizens linked to a religious gathering in Pakistan

In March 2020, the South African government joined other world governments by repatriating their citizens stranded abroad due to travel restrictions enforced globally. On 21 April 2020, a group of 85 individuals, the majority of whom had travelled for Jamaat (an Islamic missionary movement) prior to the holy month of Ramadan, were repatriated from Pakistan to South Africa after completing a quarantine period and testing negative for SARS-CoV-2 in Pakistan. On arrival in South Africa, they were quarantined at one of the many designated quarantine sites across Gauteng Province. Eleven of the 85 (13%) repatriates tested positive for SARS-CoV-2 after being in quarantine for eight days in South Africa.

A cross-sectional study with supporting descriptive analysis was performed to identify and verify the existence of a cluster of SARS-CoV-2 amongst the repatriates at the quarantine site. Additional objectives were to describe the characteristics of positive COVID-19 cases identified, identify common exposures of the cluster and to institute control measures for prevention of transmission.

INTERNATIONAL OUTBREAKS OF IMPORTANCE

Data were collated from various data sources, which included person-under-investigation forms, contact line lists and laboratory reports. A questionnaire was developed and telephonic interviews were conducted to obtain basic demographics and possible exposure information for the period dating back 14 days prior to returning to South Africa. An inclusion criteria of being repatriated from Pakistan, over the age of 18 years and reachable for a telephonic interview was applied to the study participant list.

All eleven of the repatriates who tested positive for SARS-CoV-2 were asymptomatic at the time of specimen collection and remained asymptomatic at the time of interview, i.e. 14 days after repatriation. Of the 85 repatriates, 83 (98%) had demographic information available. For these 83 repatriates the median age in years was 25 (IQR, 19-32); 96% (n=80) were male; 89% (n=74) were of Indian descent and 81% (n=67) followed the Islamic religious faith. Of the 65 repatriates who met the inclusion criteria, ten who tested positive for SARS-CoV-2 were 18 to 24-year-olds and were all male. Six of these ten cases reported sharing a living space with 5-10 other people while attending the Jamaat in Pakistan. Although knowledge of the ongoing pandemic and preventative measures were widespread, social distancing and hand sanitisation was not common practice whilst in Pakistan, and less so in religious gatherings. In addition, five of the ten cases had a history of smoking or were active smokers.

As illustrated by the South Korean church outbreak and the cluster linked to a church gathering in the Free State Province, religious gatherings continue to provide opportunities for ongoing transmission of the SARS-CoV-2 virus. The South African government's regulations stating that no gatherings, religious or otherwise should comprise more than 50 participants is an attempt to limit such transmission events, through social distancing. Although all cases reported being asymptomatic in South Africa, a lack of information for the quarantine conditions and period in Pakistan for all the repatriates makes drawing conclusions difficult. However, the fact that half of the cases eligible for interview reported a history of smoking or were active smokers, suggests that smoking may be an important yet contentious risk factor.

Source: National Institute for Communicable Diseases COVID-19 response team; NICD-NHLS; nevashang@nicd.ac.za

An update on Ebola virus disease outbreak, Democratic Republic of Congo

On 1 June 2020, seven cases of Ebola were reported in Mbandaka city and neighbouring Bikoro Health Zone in Équateur Province, and an 11th Ebola virus disease (EVD) outbreak in the Democratic Republic of Congo (DRC) was declared.

The EVD outbreak in Équateur Province continues to see rising numbers of confirmed cases and geographical spread. From 10 to 16 August 2020, another nine additional confirmed EVD cases had been reported, including three new deaths. The health areas of Lyembe Moke in Bikoro Health Zone, Bosomondomba in Bolomba Health Zone and Butela in Iboko Health Zone have not reported new confirmed cases for 42 days, with the last confirmed case reported on 4 July 2020.

As of 15 August 2020, there is a total of 88 cases (84 confirmed and four probable) including 36 deaths (case fatality ratio 41.8%). The case fatality ratio among confirmed cases is 38.1% (32 deaths/84 confirmed cases). The number of health workers affected remains at three, making up 3.4% of all cases. The number of health areas that have reported at least one confirmed or probable case of EVD since the start of this outbreak has risen to 30, in 10 of the 18 health zones in the province. In the past 21 days (26 July to 15 August 2020), 21 confirmed cases have been reported in 14 health areas across eight health zones.

Of the four out of eight health zones reporting contacts, no new contacts were listed on 15 August 2020. Of 3 327 active contacts listed, 3 160 (95%) were followed-up. Of the 60 unseen contacts for whom information was available, eight (13.3%) had never been seen, five (8.3%) were lost to follow-up and the remaining 47 (78.4%) had not been seen in the previous 24 hours. To date, no