b Crimean-Congo haemorrhagic fever

To date this year, there have been no reported cases, or suspected cases of Crimean-Congo haemorrhagic fever (CCHF). In 2015, a single case was diagnosed in Free State Province and the patient recovered uneventfully. In 2014 and 2013, there were six and five cases respectively.

CCHF is an emerging zoonotic disease transmitted by hard or ixodid ticks. The CCHF virus has been reported in more than 30 countries in Africa, the Middle East, Asia and south-eastern Europe. In 2011 the disease was reported for the first time in India. In Turkey and other eastern European countries up to thousands of cases of CCHF are reported annually. In South Africa, CCHF is a rare disease in humans with a total of 200 cases laboratory confirmed between 1981 and 2015. Fewer than ten cases are reported annually. CCHF has been reported from all nine provinces of South Africa, although most cases are reported from the Free State, Northern Cape and North West provinces.

The emergence of CCHF is linked to the expanding distribution of *Hyalomma* ticks, in particular *Hyalomma marginatum* (also known in South Africa as the 'bontpoot' tick). CCHF is typically reported in farmers, farm workers, slaughter house workers, veterinarians and others that may come into contact with these ticks. In South Africa, more than two-thirds of cases reported a tick bite or contact with ticks. In a few cases, contact with infected animal blood or tissues were implicated. Nosocomial transmission of CCHF has occurred on four occasions in South Africa since 1981.

The clinical presentation of CCHF varies greatly. The spectrum of disease ranges from sub-clinical or mild disease to fatal haemorrhagic manifestations. The incubation period varies based on the type of exposure. With tick bites, the incubation period is short (1-3 days), whilst contact with contaminated blood and tissues results in a longer incubation period of up to 7 days. The disease is generally characterized by an abrupt onset of fever with malaise, myalgia, abdominal pain, nausea, vomiting and diarrhea. Haemorrhage is not present in all cases and may manifest as a petechial rash, ecchymosis, epistaxis, melena, hematuria or intraabdominal bleeding. Routine blood screens will reveal invariably reveal thrombocytopenia and elevated liver transaminases whilst leukopenia and hyperbililrubinemia are also reported. Confirmatory laboratory testing is available from the National Institute for Communicable Diseases. The Institute offers an array of laboratory tests including RT-PCR, indirect immunofluoresence assay, IgG and IgM ELISA and virus isolation. The Institute operates the only biosafety level 4 laboratory where safe and secure handling and storage of the haemorraghic fever viruses can be executed.

There are no vaccines or specific treatments for CCHF virus infection. The effectiveness of ribavirin is contentious at the present moment. Management is supportive. Infection control precautions are essential to avoid nosocomial transmission.

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