NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

Communicable Diseases Communiqué

MAY 2014, Vol. 13(5)

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1 INTERNATIONAL ALERTS

a MERS-CoV: update

Background

Middle East respiratory syndrome coronavirus (MERS-CoV) is a recently identified respiratory virus which causes severe respiratory illness. It was first reported in Saudi Arabia in 2012. From September 2012 to date, WHO has been informed of a total of 536 laboratory-confirmed cases of human infection with MERS-CoV including 145 deaths (case fatality ratio 27%). The number of cases reported has increased sharply since March 2014. To date, all the cases reported have been linked to countries in the Arabian Peninsula. Countries in the Arabian Peninsula with laboratory-confirmed cases include Jordan, Saudi Arabia, Yemen, United Arab Emirates (UAE), Qatar, Oman, Kuwait and Lebanon. Countries with travel-associated cases include United Kingdom (UK), Tunisia, Egypt, Greece, Germany, Italy, Malaysia, Philippines and United States of America (USA).

Presentation and clinical course

The majority of cases (67%) are male, and the median age is 69 years. Patients with MERS-CoV have presented with respiratory infections ranging from mild upper respiratory tract illness to severe lower respiratory disease. The majority of cases have presented with acute, serious respiratory illness with fever, cough, and shortness of breath. Some patients, especially the immunosuppressed, have presented with fever and diarrhoea. More severe disease has been reported in patients with comorbidities. Primary cases were predominantly symptomatic leading to high rates of admission to the hospital and death, whereas secondary infections led to lower rates of symptomatic illness and death (except in those who were already hospitalised). An increased proportion of mild cases have been detected as more potential contacts are being tested for the presence of the virus. Complications have included severe pneumonia and acute respiratory distress syndrome requiring mechanical ventilation, multi-organ failure, renal failure requiring dialysis, and pericarditis.

Transmission

Although there is growing evidence that the

dromedary camel is a host species for the MERS-CoV and that camels likely play an important role in the transmission to humans, the routes of direct and indirect transmission remain unknown. The virus has spread from person-to-person through close contact, such as caring for or living with an infected person. The majority of secondary cases are healthcare workers (and a small number of patients in hospital) who have likely become infected in the healthcare facility setting. However, there is currently no evidence of sustained spread of MERS-CoV in community settings.

Management

There is no specific treatment for disease caused by MERS-CoV. However, many of the symptoms caused by this virus can be treated and therefore treatment should be based on the symptoms. There is no available vaccine at present.

Precautions and infection prevention and control considerations

The increase in numbers of recently reported cases from healthcare workers and in healthcare facility settings underscores the importance of infection prevention and control. When providing care to all patients with symptoms of acute respiratory infection and whenever specimens are collected from cases under investigation, the appropriate infection prevention and control guidelines should be followed. The WHO Interim Guidelines on Infection prevention and control of epidemic- and pandemic-prone acute respiratory diseases in health care (2014) can be accessed at: http://www.who.int/csr/bioriskreduction/infection_control/publication/en/

Patients should be managed as potentially infected when the clinical and epidemiological clues strongly suggest MERS-CoV, even if an initial test on a nasopharyngeal swab is negative. Repeat testing should be done when the initial testing is negative, preferably on specimens from the lower respiratory tract.

WHO does not advise screening at points of entry or travel or trade restrictions.

Indications for testing

MERS-CoV should be suspected in anyone who develops fever and symptoms of respiratory illness, such as cough or shortness of breath, within 14 days after traveling from countries in or near the Arabian Peninsula. Details of case definitions, indications for testing and appropriate specimens for MERS-CoV can be accessed at the NICD webpage: http://www.nicd.ac.za/?page=alerts&id=5&rid=340

Additional information on MERS-CoV can be accessed at the following websites:

WHO website: http://www.who.int/csr/disease/coronavirus_infections/en/

NICD website: http://www.nicd.ac.za

WHO website: http://www.who.int/csr/bioriskreduction/infection_control/publication/en/

CDC website: http://www.cdc.gov/coronavirus/index.html

Source: Centre for Respiratory Diseases and Meningitis, NICD-NHLS