

Epidemiology and Clinical Management of Middle-East Respiratory Syndrome-Coronavirus Infection

中東呼吸症候群冠狀病毒(MERS-CoV)之流行病學與臨床治療

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Coronaviruses have traditionally been associated with mild upper respiratory tract infections throughout the world. However, in the fall of 2002, a new coronavirus emerged in Asia causing severe pneumonia, *i.e.*, severe acute respiratory syndrome (SARS). Nearly a decade following the SARS epidemic, another coronavirus, the Middle-East Respiratory Syndrome-Coronavirus (MERS-CoV), an emerging virus, was first isolated from a patient in Jeddah, Saudi Arabia, in June 2012. Since then, there have been 877 cases of laboratory-confirmed cases, including at least 317 deaths (up to 16 Oct. 2014), reported to WHO. MERS-CoV is capable of causing a spectrum of illness ranging from asymptomatic infection to severe pneumonia requiring intensive care unit admission. Limited human-to-human transmission has occurred, including transmission to health care workers and via household contacts. Although mainly currently restricted to Middle Eastern countries, MERS-CoV was reported from at least 10 other countries in Europe, Asia and the United States and all primary cases have been linked to travel to the Middle East. Although bats are believed to carry CoV ancestors, antibody reactivity against MERS-CoV has been found in serum from dromedary camels from countries within the Arabian Peninsula, Egypt, and the Canary Islands. More recently, MERS-CoVs that phylogenetically cluster with human MERS-CoVs were detected in camels from Qatar, Saudi Arabia, and Egypt, suggestive of zoonotic sources of MERS-CoV. At present time, neither WHO nor CDC, Taiwan has not issued travel advisories discouraging travel to the Middle East. Travelers to the Middle East should be provided with current information on MERS-CoV and guidance on how to avoid illness while traveling, including hand hygiene, avoiding sick contacts, and avoiding ingestion of raw or undercooked animal products. So far, specific antiviral therapy is lacking and management remains mainly supportive, but ribavirin and pegylated interferon have been considered in patients with severe MERS-CoV infection, provided that adequate monitoring and assessment can be ensured. Further assessment in appropriately designed randomized trials of such a combination is recommended before its general application in symptomatic patients with MERS-CoV infection. No vaccine is available for MERS-CoV, thus good infection control practices are the primary mode of control.