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Commentary

Hadj ritual and risk of a pandemic

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At mass gatherings such as the Hadj, one of the greatest Islamic rituals, pilgrims are exposed to various infectious agents.¹ The pilgrims bring home not only souvenirs but also various infectious agents, as is evident from an increase in the incidence of infectious diseases—mainly flu-like syndromes—in returning pilgrims every year. From early October 2013, Saudi Arabia will be hosting millions of Muslims from different parts of the world who travel to Saudi Arabia to participate in the Hadj. However, since November 2012, Saudi Arabia has also hosted a new fatal viral infection: the Middle East respiratory syndrome coronavirus (MERS-CoV).

Coronaviruses are enveloped, single-stranded, positive-sense RNA viruses. The first known occurrence of MERS-CoV in human was reported in a patient with severe acute respiratory infection in April 2012, in Jordan.² Later, person-to-person transmission was reported,³ which is very important because it might result in a switch from aborted outbreaks to a pandemic, which was probably the case for the severe acute respiratory syndrome (SARS) coronavirus outbreak in 2003–2004.

As of August 13, 2013, 94 laboratory-confirmed cases of human infection with MERS-CoV had been reported to the World Health Organization, 46 (49%) of which have been fatal. The age of the affected patients ranged from 14 months to 94 years (median, 50 years). The incubation period of the infection is estimated at 1 week, based on the available data.⁴

MERS-CoV has a high mortality rate of almost 50%, and thus the possibility of a pandemic is worrying. Soon after pilgrims return home, they hold ceremonies and invite relatives and friends to celebrate their return from Hadj, which provide further opportunities for the spread of the virus.

There are many reasons to convince us that MERS-CoV represents a high risk: a deadly virus that can be transmitted from person to person, a mass gathering of millions of people from different parts of the world at the epicenter of the infection, an incubation period that provides enough time for pilgrims to return home and disseminate the virus, ceremonies that place relatives and friends in close contact with infected individuals when they return, and signs and symptoms that can easily be mistaken for common postpilgrimage flu-like syndromes.⁵

This year, health care workers should be more alert to identify the probable cases of MERS-CoV infection as early as possible. The total risk may not be very high, but, considering the devastating outcome for the Middle East in particular, and world at large, it would be wise to take into account even minute risks and take all possible safety precautions into action.

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