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CORONAVIRUS, CAUSE FOR CONCERN?

Relevant for: Developmental Issues | Topic: Health & Sanitation and related issues

This undated electron microscope image shows novel coronavirus particles, also known as the MERS virus, colorized in yellow. The mysterious new respiratory virus that originated in the Middle East spreads easily between people and appears more deadly than SARS. Photo: AP

In June last year, a 60-year-old man, who had been admitted to a private hospital in Jeddah, Saudi Arabia, with fever, cough and shortness of breath, subsequently died of pneumonia and kidney failure. An Egyptian virologist working at the hospital, Ali Mohamed Zaki, was determined to find the microbe that caused his death.

“A new human coronavirus was isolated from a patient with pneumonia,” announced Dr. Zaki in September on ProMed-mail, an email-based service that tracks infectious disease outbreaks globally. Just days later, after seeing Dr. Zaki's post, doctors in Britain found the very same virus in a Qatari man who had been flown to that country by air ambulance, suffering from acute respiratory problems and kidney failure.

The World Health Organisation then immediately alerted all countries about the new virus, which has since come to be called the Middle East respiratory syndrome coronavirus (MERS-CoV).

There have been 82 laboratory-confirmed cases of infection with the virus so far, with 45 deaths. The vast majority of these cases have been in Saudi Arabia.

The WHO has convened an Emergency Committee, comprising a range of health experts from various countries, to help it decide whether the outbreaks caused by this virus constituted a ‘public health emergency of international concern’ under the International Health Regulations.

Unquestionably, there is the memory of another coronavirus — the one that ten years ago caused SARS (Severe Acute Respiratory Syndrome), which smouldered in southern China in late 2002 and then suddenly exploded globally the following year.

In the course of a few months, that virus infected over 8,000 people and caused nearly 800 deaths in more than 30 countries. It disrupted travel and trade, and is estimated to have cost the global economy about U.S. $30 billion.

Going by genome similarity, the MERS-CoV, like the SARS virus, appears to have originated in bats. However, an animal source for human infections has yet to be definitely identified.

One hypothesis has been that bats could be contaminating a human food source, such as dates that are widely grown in some parts of Saudi Arabia. A recent media report said that sales of Saudi dates had dropped sharply as a result of such fears.

Another possibility is that the MERS virus has crossed from bats into an animal that humans frequently come into contact with. Research published last December showed the virus thrived in bat, human and pig cell lines. The fact that virus could grow in swine cells suggested that hoofed animals kept as livestock might be able to carry it, observed Christian Drosten, director of the Institute of Virology in Bonn, Germany, in an email.

Once an animal reservoir for the virus is established, steps can then be taken to stop further human infections from that source. With SARS, after closely related viruses were found in civets

in live animal markets in southern China, where the animal's meat is considered a delicacy, its sale was promptly halted.

As with the SARS virus, the MERS-CoV too is capable of causing severe respiratory illness. However, recently some women and children have been identified who caught the MERS virus from other infected individuals but suffered little or no illness as a result.

The MERS-CoV can spread through close contact with a sick person, and such transmission has occurred in families as well as in hospitals. "However, the virus has not [been] shown to spread in a sustained way in communities," noted the U.S. Centers for Disease Control and Prevention.

In research published earlier this month in *The Lancet*, a group of French scientists estimated that currently the human-to-human transmissibility of the MERS-CoV was close to that of the SARS virus in its pre-pandemic stage. "Our analysis suggests that MERS-CoV does not yet have pandemic potential," observed Arnaud Fontanet and his colleagues at the Institut Pasteur in Paris.

The SARS virus mutated over time and gained the ability to pass more easily from one human to another. The big worry is that the MER-CoV might do something similar.

"One of the main lessons of the SARS pandemic has been that early control of the virus (while it was still confined to south-east China) might have prevented its global spread," pointed out Dr. Fontanet and the other scientists in their paper.

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The Delhi High Court has asked the AAP and the All India Institute of Medical Sciences (AIIMS) whether there are any facilities in and around the

The petitioner has contended that he has been regularly paying the premium for a sum assured of 35 lakh, but when he claimed the insurance amount for his treament, he came to know that in case of a mental illness the sum assured is restricted to 50,000.

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