

Fulllest clinical report of Saudi MERS points to important differences with SARS cases to date

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The new research, published in *The Lancet Infectious Diseases*, also reveals some important differences with severe acute respiratory syndrome (SARS).

MERS emerged a year ago in Saudi Arabia and almost all those infected have been reported there, or have been linked to people who contracted the virus there.

The new analysis, the largest case series to date, includes 47 cases (46 adults, 1 child) of confirmed MERS infections from Saudi Arabia between Sept 1, 2012, and June 15, 2013.

By combining clinical records, laboratory results, and imaging findings with demographic data, the authors noted a trend of older patients, more men, and patients with underlying medical conditions who succumb to the disease.

As with SARS, MERS infections presented with a wide spectrum of symptoms. Most patients admitted to hospital exhibited fever (98%), chills/rigors (87%), cough (83%), shortness of breath (72%), and [muscle pain](#) (32%). A quarter of patients also experienced [gastrointestinal symptoms](#), including diarrhoea and vomiting.

However, in contrast to SARS, the majority of cases (96%) occurred in

people with underlying chronic medical conditions including diabetes (68%), high blood pressure (34%), [chronic heart disease](#) (28%), and chronic renal disease (49%).

"Despite sharing some clinical similarities with SARS (eg, fever, cough, incubation period), there are also some important differences such as the rapid progression to respiratory failure, up to 5 days earlier than SARS"*, explains Professor Ziad Memish, the Deputy Minister for Public Health from the Kingdom of Saudi Arabia, who led the research.

"In contrast to SARS, which was much more infectious especially in healthcare settings and affected the healthier and the younger age group, MERS appears to be more deadly with 60% of patients with co-existing [chronic illnesses](#) dying, compared with the 1% toll of SARS. Although this high mortality rate with MERS is probably spurious due to the fact that we are only picking up severe cases and missing a significant number of milder or asymptomatic cases, so far there is little to indicate that MERS will follow a similar path to SARS."

According to co-author Professor Ali Zumla from University College London, "The recent identification of milder or asymptomatic cases of MERS in health care workers, children, and family members of contacts of MERS cases indicates that we are only reporting the tip of the iceberg of severe cases and there is a spectrum of milder clinical disease which requires urgent definition. Ultimately the key will be to identify the source of MERS infection, predisposing factors for susceptibility to infection, and the predictive factors for poor outcome. Meanwhile infection control measures within hospitals seem to work."

Writing in a linked Comment, Professor Christian Drosten from the University of Bonn Medical Centre in Germany points to the urgent need for accurate diagnostic tests to help focus control efforts and minimise the risk of spread to others, "To ascertain relevant data for MERS

epidemiology, we need to develop serological assays using samples from well defined groups of patients, such as described here. Population-based antibody testing could establish the extent of MERS-CoV infection, instead of only seeing the tip of the iceberg represented by [cases](#) admitted, such as those summarised in this important paper."

More information: *The Lancet Infectious Diseases*
[www.thelancet.com/journals/lan ... \(13\)70204-4/abstract](http://www.thelancet.com/journals/lan... (13)70204-4/abstract)

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