

Current Event

Asymptomatic MERS Infections

Contact tracing during a recent outbreak of (7) cases of MERS in one of the major hospitals in Riyadh revealed 18 asymptomatic infections.

Editorial Notes

Since 2012, approximately 20% of laboratory confirmed MERS cases have been classified as asymptomatic or having mild disease at the time of testing. Serological tests revealed that RT-PCR could detect only 50% of asymptomatic infections. Sometimes it is difficult to classify a case as 'asymptomatic' because although the person may not have any symptoms at the time of testing, he or she may develop illness during the course of infection. Most MERS cases among children appear to be asymptomatic; severe disease can occur in children with underlying conditions. Asymptomatic infections could pose difficulties for control efforts if these individuals are able to transmit the virus to others. Thus, when MERS cases are detected, one of the major interventions is to monitor contacts for symptoms of MERS.

The potential for transmission of infection from asymptomatic RT-PCR positive persons is currently unknown. The virus does not appear to pass easily from person to person unless there is close contact, such as providing unprotected care to an infected patient. However, prolonged nasal virus RNA detection (more than 5 weeks) from one asymptomatic RT-PCR positive Healthcare Worker (HCW) has been reported. A study found that about 2% of contacts were positive for MERS on PCR assays and the viral loads varied from below 500 copies to 80,000 copies. Mild symptoms occurred in one contact that

The Basic Reproduction Number (R_0)

- MERS-CoV spreads relatively ineffectively from human-to-human.
- To-date, there is no sustained transmission of MERS-CoV from human to human.
- The basic reproduction number (R_0) - the average number of infections caused by one infected individual in a fully susceptible population - has been close to one throughout various clusters and outbreaks. If R_0 was greater than 1, a sustained increase in case numbers would be expected. Some R_0 calculations may be affected by incomplete case contact tracing, limited community testing and how a case is defined.

- WHO recommends that all close contacts of confirmed MERS cases, especially unprotected HCW and other hospital contacts (e.g. non-HCW, patients and visitors), be tested for MERS-CoV regardless of the presence of symptoms.
- A rise in the cases termed asymptomatic would enlarge the denominator for calculations of the proportion of fatal cases (Case-Fatality Ratio (CFR%)).
- HCWs should be educated and trained in infection prevention and control and should refresh these skills regularly.

Cases of MERS-CoV: International Week (IW) No. 24: 12 – 18 June 2016

Total	25
Symptomatic (S)	7
Asymptomatic (AS)	18
Healthcare worker (S)	6
Healthcare Worker (AS)	11

developed pharyngitis and the highest viral load; i.e., contagiousness does not completely coincide with symptoms.

According to MoH guidelines, asymptomatic RT-PCR positive persons; especially HCW, should be isolated, followed up daily for symptoms and tested at least weekly - or earlier, if symptoms develop - for MERS-CoV. The decision on where to isolate asymptomatic RT-PCR positive persons should be based on careful clinical judgment, presence of comorbidities, social and environmental conditions of the person's household, and presence of household members with co-morbidities associated with increased risk of severe MERS-CoV infection. Isolation should continue until two consecutive upper respiratory tract samples (e.g. nasopharyngeal [NP] and/or oropharyngeal [OP] swabs) taken at least 24 hours apart test negative on RT-PCR.

Recent Publications:

Sherbini N, Iskandrani A, Kharaba A, Khalid G, Abduljawad M, Al-Jahdali H. Middle East respiratory syndrome coronavirus in Medinah City, Saudi Arabia: Demographic, clinical and survival data. J Epidemiol Glob Health. 2016 Jun 11. pii: S2210-6006(15)30092-7. doi: 10.1016/j.jegh.2016.05.002.

MERS-CoV in KSA 2016*

Region	Case	Primary	Secondary	U.C.
Riyadh (22)	53	22	29	2
Qassim	36	10	23	3
Hail	7	6	0	1
Jeddah	5	4	0	1
Asir	5	4	1	0
Taif (1)	5	4	1	0
Najran (1)	5	4	0	1
Al-Ahsaa	3	3	0	0
Madinah (1)	3	3	0	0
Eastern Region	2	2	0	0
Al-Baha	1	0	0	1
Bisha	1	1	0	0
Tabuk	1	1	0	0
Makkah	0	0	0	0
Al-Joaf	0	0	0	0
Jazan	0	0	0	0
Northern Borders	0	0	0	0
Qunfotha	0	0	0	0
Hafr Al-Batin	0	0	0	0
Qurayyat	0	0	0	0
Total	127	64	54	9

Case: Confirmed Symptomatic. U.C.: Unclassified cases

*Period: Form 3 Jan to 18 June 2016

Regions with new cases of this week are highlighted in yellow.

