

Original Paper

Epidemiology and Predictors of Survival of MERS-CoV Infections in Riyadh Region, 2016

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Abstract

Background: MERS-CoV emerged as a zoonotic disease in Saudi Arabia with 1437 cases as of July 2016.

Objective: This study aimed at describing the epidemiology of MERS-CoV infection, clinical aspects of the disease and the determinants of survival.

Methods: Medical records were reviewed between April 2014 and December 2015 to identify admission and discharge with MERS-CoV. Patients' characteristics, epidemiologic and clinical data and laboratory results were extracted and described. Logistic regression analyses were used to model the determinants of the survival of these patients. Significance of the results were judged at the 5% level.

Results: 249 laboratory confirmed cases were admitted mostly in August (20.48%) and September (14.86%) of the year 2015. These cases were non-healthcare workers (85.14%), Saudi (58.63%), males (57.03%) with a mean age of 46.71 ± 17.92 years. A third (39.36%) reported contact with suspected or confirmed cases, developed the disease after 6.2 days and continued to shed the virus for 13.17 days on average. The case fatality rate was 20.08%. The likelihood of being discharged alive was significantly higher among non-Saudi (OR=2.35), healthcare workers (OR=10.822), with no co-morbidities (OR=6.57).

Conclusions: MERS-CoV mortality is higher among older patients with severe disease. Further studies are recommended for a better estimation of the incubation period and the period of communicability and the role of animal reservoir.

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