CORRESPONDENCE

Hospital-Associated Middle East Respiratory Syndrome Coronavirus Infections

TO THE EDITOR: Assiri et al. (Aug. 1 issue)[1] provide valuable information about a hospital outbreak of Middle East respiratory syndrome coronavirus (MERS-CoV) infection. However, the authors do not describe the infection-control measures used in the hospital, and they do not discuss the possibility of aerosol transmission of MERS-CoV, a coronavirus similar to the severe acute respiratory syndrome coronavirus (SARS-CoV). MERS-CoV can cause severe or fatal disease, and there is no prophylaxis or specific treatment. If the form of transmission is not understood, health care professionals should adhere to the precautionary principle that reasonable steps to reduce risk should not await scientific certainty. It is for this reason that the Centers for Disease Control and Prevention (CDC) recommended airborne precautions (the use of respirators rather than surgical masks), in addition to standard and contact precautions, for all patients with MERS-CoV. There is evidence that SARS-CoV was transmitted by respiratory aerosols,[2-4] and surgical masks do not provide adequate protection against inhalation of aerosols.[5] Health care workers have already been infected with MERS-CoV. It would be prudent for hospitals with the resources to do so to provide a higher level of protection (i.e., respirators) for their health care workers.

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No potential conflict of interest relevant to this letter was reported.

1. Assiri A, McGeer A, Perl TM, et al. Hospital outbreak of Middle East respiratory syndrome coronavirus. N Engl J Med 2013;369:407-16. [Erratum, N Engl J Med 2013;369:886.]
2. Olsen SJ, Chang HL, Cheung TY, et al. Transmission of the severe acute respiratory syndrome on aircraft. N Engl J Med 2003;349:2416-22.
3. Yu IT, Li Y, Wong TW, et al. Evidence of airborne transmission of the severe acute respiratory syndrome virus. N Engl J Med 2004;350:1731-9.
4. Booth TF, Kournikakis B, Bastien N, et al. Detection of airborne severe acute respiratory syndrome (SARS) coronavirus and environmental contamination in SARS outbreak units. J Infect Dis 2005;191:1472-7.
5. Oberg T, Brosseau LM. Surgical mask filter and fit performance. Am J Infect Control 2008;36:276-82.

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THE AUTHORS REPLY: In our article, we indicated the infection-control measures that were taken in Hospital A. These measures included enhancing hand hygiene, using droplet and contact precautions for febrile patients and testing these patients for MERS-CoV, putting surgical masks on all patients undergoing hemodialysis and particulate respirators (N95 masks) on any patient with confirmed MERS-CoV who was undergoing an aerosol-generating procedure, not allowing patients with suspected MERS-CoV infection into the dialysis and the intensive care units, aug-

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menting environmental cleaning, and excluding nonessential staff as well as visitors.

The epidemiologic investigation and phylogenetic analyses indicate that the most likely form of transmission during the outbreak was person-to-person transmission, either through respiratory droplets or through direct or indirect contact. The applied infection-control measures appeared to have been effective in averting the outbreak.

The CDC continues to recommend the use of airborne-infection isolation rooms for patients with SARS and MERS-CoV.[1,2] Cohorting of patients in one floor or unit is a viable strategy to devote resources and staff to the care of patients.[1] The infection-control measures applied in the Al-Hasa outbreak probably contributed to the control of the outbreak and were consistent with the World Health Organization's interim infection-control guidance, which is based on the available scientific evidence.[3]

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Since publication of their article, the authors report no further potential conflict of interest.

1. Centers for Disease Control and Prevention. Public health guidance for community-level preparedness and response to severe acute respiratory syndrome (SARS) version 2 — supplement I: infection control in healthcare, home, and community settings. January 2004 (http://www.cdc.gov/sars/guidance/I-infection/healthcare.pdf).
2. *Idem*. Interim infection prevention and control recommendations for hospitalized patients with Middle East respiratory syndrome coronavirus (MERS-CoV). September 2013 (http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html).
3. World Health Organization. Infection prevention and control during health care for probable or confirmed cases of novel coronavirus (nCoV) infection: interim guidance. May 2013 (http://www.who.int/csr/disease/coronavirus_infections/IPCnCoVguidance_06May13.pdf).

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Treatment for High-Risk Smoldering Myeloma

TO THE EDITOR: In the study by Mateos et al. (Aug. 1 issue)[1] involving patients with high-risk smoldering multiple myeloma, early treatment with lenalidomide plus dexamethasone, as compared with observation, resulted in a delay in progression to symptomatic disease and an increase in overall survival. Currently, the standard of care for patients with smoldering multiple myeloma has been observation until symptomatic disease occurs.[2] Patients in the trial by Mateos et al. met at least one of two sets of inclusion criteria based on a definition of "high-risk" disease. The first set included plasma-cell bone marrow infiltration of 10% or more and a serum M-protein level of 3 g per deciliter or more.[3] The second set included 95% phenotypically aberrant plasma cells in the bone marrow plasma-cell compartment detected with the use of flow cytometry as well as reductions in one or two uninvolved immunoglobulins.[4] Since 40% of the patients in the trial were included on the basis of flow-cytometry criteria, which are not widely available, and the results were not stratified according to the definition of high-risk status, there are some concerns regarding the generalizability of this study.

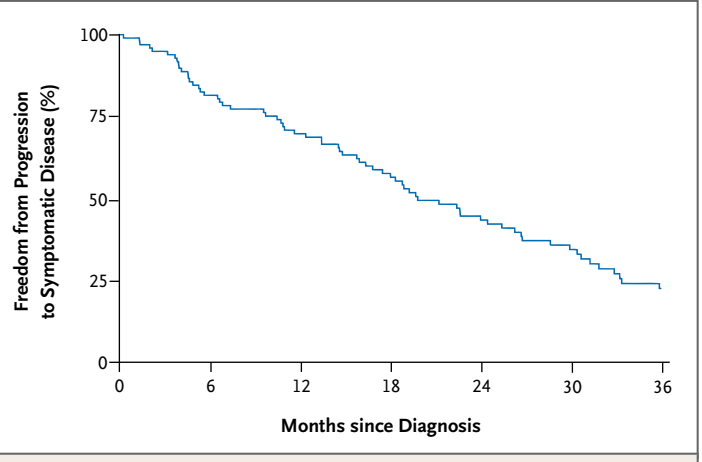

Figure 1. Freedom from Progression to Symptomatic Disease among Patients with High-Risk Smoldering Multiple Myeloma in Sweden, 2008–2011.
A Kaplan–Meier estimate of the time to progression to symptomatic disease is shown.

We analyzed the incidence and outcome of smoldering multiple myeloma using the Swedish Myeloma Registry, which is a prospective obser-