

Renal Failure

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LETTER TO THE EDITOR



Middle East respiratory syndrome coronavirus infection: a short note on cases with renal failure problem

Sir,

The Middle East respiratory syndrome coronavirus infection is the present public health problem. At present, the serious new emerging infection is reported in many new settings including to East Asia. The infection is usually an acute febrile illness with severe respiratory problems. However, the other systemic problem can also be seen. In nephrology, the infection on cases with underlying renal failure problem is very interesting. Similar to any other new emerging disease, the patients with the renal problem can get the infection and the severe clinical feature can be expected. According to a recent publication by Shalhoub et al., the very high mortality rate (100%) could be observed in renal failure patients infected with the Middle East respiratory syndrome coronavirus.¹ Of interest, the standard antiviral, ribavirin therapy is found to be ineffective for the management of infection in cases with underlying renal failure.² In addition, according to a recent case-control study, having the end-stage renal disease in cases with pneumonia is a risk of severe infection.³ Indeed, the infection can also induce acute renal injury⁴⁻⁶ and this might superimpose the patient with an underlying renal problem. In cases with viralinduced acute renal failure, the disappearance of virus in the urine sample is the important observation when renal failure occurs.⁷ Accompanied with respiratory failure, acute renal failure can be the cause of death in the severely infected cases.⁸ It is no doubt that the patients with underlying chronic renal problem especially those on hemodialysis have a high risk to get disease transmission from the other patients.⁹ Finally, the Middle East respiratory syndrome coronavirus infection among the patients with renal transplantation is also reported.¹⁰ AlGhamdi et al. reported on "variable clinical presentations and outcome" among these patients.¹⁰ In conclusion, renal failure can be the important problem in the Middle East respiratory syndrome coronavirus infection. The infection can

induce renal failure. In addition, the patient with underlying renal failure can have a high risk to get an infection and if they get an infection, severe clinical features can be expected. The closed monitoring of renal function among the patients with the Middle East respiratory syndrome coronavirus infection is suggested.

Declaration of interest

The authors report no conflicts of interest.

References

- 1. Shalhoub S, Farahat F, Al-Jiffri A, et al. IFN- α 2a or IFN- β 1a in combination with ribavirin to treat Middle East respiratory syndrome coronavirus pneumonia: A retrospective study. *J Antimicrob Chemother*. 2015;70: 2129–2132.
- 2. Al-Tawfiq JA, Momattin H, Dib J, Memish ZA. Ribavirin and interferon therapy in patients infected with the Middle East respiratory syndrome coronavirus: An observational study. *Int J Infect Dis.* 2014;20:42–46.
- 3. Al-Tawfiq JA, Hinedi K, Ghandour J, et al. Middle East respiratory syndrome coronavirus: A case-control study of hospitalized patients. *Clin Infect Dis.* 2014;59: 160–165.
- 4. Arabi YM, Arifi AA, Balkhy HH, et al. Clinical course and outcomes of critically ill patients with Middle East respiratory syndrome coronavirus infection. *Ann Intern Med.* 2014;160:389–397.
- Eckerle I, Müller MA, Kallies S, Gotthardt DN, Drosten C. *Invitro* renal epithelial cell infection reveals a viral kidney tropism as a potential mechanism for acute renal failure during Middle East Respiratory Syndrome (MERS) Coronavirus infection. *Virol J.* 2013;10:359.
- Guery B, Poissy J, el Mansouf L, et al. Clinical features and viral diagnosis of two cases of infection with Middle East Respiratory Syndrome coronavirus: A report of nosocomial transmission. *Lancet* 2013;381: 2265–2272.
- 7. Drosten C, Seilmaier M, Corman VM, et al. Clinical features and virological analysis of a case of Middle East respiratory

syndrome coronavirus infection. *Lancet Infect Dis.* 2013;13:745–751.

- Chan JF, Lau SK, Woo PC. The emerging novel Middle East respiratory syndrome coronavirus: The "knowns" and "unknowns". J Formos Med Assoc. 2013;112:372–381.
- Assiri A, McGeer A, Perl TM, et al. Hospital outbreak of Middle East respiratory syndrome coronavirus. N Engl J Med. 2013;369:407–416.
- AlGhamdi M, Mushtaq F, Awn N, Shalhoub S. MERS CoV infection in two renal transplant recipients: Case report. *Am J Transplant*. 2015;15:1101–1104.

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