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Editor's Note

We hope this interesting case will motivate the nephrology community to look at our patients on peritoneal dialysis and consider testing their dialysate. We suggest that it will be of critical importance to go beyond polymerase chain reaction testing and actually attempt to culture the virus from the fluid. At this time it is not clear whether a positive polymerase chain reaction for SARS-CoV-2 means contagious virus is present.

tested her peritoneal dialysate for SARS-CoV-2 by polymerase chain reaction, and this was positive. She received 8 hemodialysis treatments and following 40 days of hospitalization, the patient was discharged and peritoneal dialysis was gradually resumed although her nasopharyngeal swab and peritoneal dialysate remained positive on discharge. Seven days after discharge, SARS-CoV-2 testing was negative in the peritoneal dialysate and nasopharyngeal swab. To our knowledge, this is the first case in the literature demonstrating SARS-CoV-2 positivity in peritoneal dialysate. Notably, SARS-CoV-2 positivity corresponded with peritoneal dialysis failure, suggesting a potential effect of the virus on the peritoneal membrane.

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Adding insult to injury: kidney replacement therapy during COVID-19 in India



To the editor The coronavirus disease 2019 (COVID-19) pandemic has challenged the resilience of health care systems worldwide. Governments have ordered nationwide lockdowns (often suddenly) in an attempt to contain the spread of infection. Such measures have posed unexpected challenges to patients with pre-existing diseases, especially in limited-

resource settings. In the current report, we describe the unique hardships confronted by treatment of in-center hemodialysis patients and kidney transplant recipients in India during the current lockdown period.

With public transport shut down and movement of private vehicles severely restricted, patients were unable to reach the dialysis facilities, often located at considerable distances.^{1–3} Nongovernment organizations and self-help groups have stepped in to help these patients, but sometimes are stopped by the police enforcing the lockdown. The majority of dialysis units are located in private hospitals. As part of the COVID-19 response, governments have taken over management of a number of private hospitals⁴ and ordered the closure of dialysis units. In some instances, units were closed down and staff were placed in quarantine after a patient or health care worker was found to be COVID-19 positive.⁵ In all such instances, patients are asked to go to other dialysis facilities, which in many instances already are working to capacity. Moreover, dialysis centers are not willing to accept newly diagnosed end-stage renal disease patients or patients shifted from closed units as a result of panic and misinformation and insist that they produce a COVID-19 test result.⁶ These problems are getting compounded by the lack of a clear and rational guidance that balances the need to contain spread while maintaining essential lifesaving treatments like dialysis. Deaths have been reported as a result of such delays.⁷

A lack of appropriate education of the dialysis workforce, combined with stigma and misinformation on social media, has created apprehension among dialysis staff. Despite the general recommendation that any quarantine should not result in loss of pay, this remains a real risk to staff in private settings.

Operations have been impacted by interruptions in medication and dialysis disposable supply chains (dialysis tubings, catheters, fluids, and drugs and/or expendables). The sudden demand for personal protective equipment led to a surge in pricing of items such as surgical masks. Some private dialysis units ask patients to pay for personal protective equipment. All elective surgical procedures have been cancelled at most centers, leading to cessation or severe curtailment of arteriovenous fistula surgery, tunneled catheter insertion, or peritoneal dialysis catheter insertion.

Kidney transplant surgeries, including those involving living donors, have been stopped in most centers. In a country where high-quality dialysis is not universally available, delaying transplant increases the risk of adverse outcomes for those who are forced to wait, especially when access to dialysis also is uncertain. Kidney transplant recipients living in remote areas are unable to obtain lifesaving immunosuppressive drugs, available only in specialized pharmacies, or undergo mandatory investigations such as monitoring of graft function or therapeutic drug levels.

COVID-19 is exposing the deficiencies in care delivery in countries with weak health systems. Although patients with all chronic conditions are disadvantaged, patients on dialysis and kidney transplant recipients need special attention. We

report the situation from India but believe patients in other countries at a similar stage of development face similar problems.³ The COVID-19 pandemic should force the global health care community and policymakers to anticipate and address the unique needs of different patient groups such as those with kidney failure.

1. Dhaliwal T. Dialysis patients have a tough time amid Covid-19 curfew in Chandigarh. *Hindustantimes*. Published April 16, 2020. Available at: <https://www.hindustantimes.com/chandigarh/kidney-patients-seeking-dialysis-have-a-tough-time-amid-covid-19-curfew-in-chandigarh/story-7C55dh16UL1SadLg9s88YM.html>. Accessed April 30, 2020.
2. Mampatta S. How coronavirus crisis is holding India's kidney patients to ransom. *Business Standard*. Published April 11, 2020. Available at: https://www.business-standard.com/article/health/how-coronavirus-crisis-is-holding-india-s-kidney-patients-to-ransom-120041100374_1.html. Accessed April 30, 2020.
3. Dare AJ, Fu SH, Patra J, et al. Renal failure deaths and their risk factors in India 2001-13: nationally representative estimates from the Million Death Study. *Lancet Glob Health*. 2017;5:e89–e95.
4. Chakravarty I. Coronavirus: three states take over private hospitals. What does the fine print say? *Scroll.in*. Published March 30, 2020. Available at: <https://scroll.in/article/957556/coronavirus-three-states-take-over-private-hospitals-what-does-the-fine-print-say>. Accessed April 30, 2020.
5. Jaiswal PB. COVID-19 cases in Mumbai leave dialysis patients in limbo. *TheWeek*. Published April 13, 2020. Available at: <https://www.theweek.in/>

[news/india/2020/04/13/covid-19-cases-in-mumbai-leave-dialysis-patients-in-limbo.html](https://www.theweek.in/news/india/2020/04/13/covid-19-cases-in-mumbai-leave-dialysis-patients-in-limbo.html). Accessed April 30, 2020.

6. Marpakwar C, Mishra L. Covid-19 tests must for chemo, dialysis patients. *MumbaiMirror*. Published April 14, 2020. Available at: <https://mumbaimirror.indiatimes.com/coronavirus/news/covid-19-tests-must-for-chemo-dialysis-patients/articleshow/75132235.cms>. Accessed April 30, 2020.
7. Salaria S. Noida: dialysis patient told to get Covid-19 test first, dies. *The Times of India*. Published April 18, 2020. Available at: <https://timesofindia.indiatimes.com/city/noida/noida-dialysis-patient-told-to-get-covid-19-test-first-dies/articleshow/75212905.cms>. Accessed April 30, 2020.

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