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## Letter regarding “SARS-CoV-2 in the peritoneal waste in a patient treated with peritoneal dialysis”



**To the editor:** We read with interest the letter from Vischini *et al.* about the presence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the peritoneal effluent of a peritoneal dialysis (PD) patient.<sup>1</sup> Coronavirus transmission occurs primarily via respiratory droplets, and it has been found inconsistently in body secretions and excretions.<sup>2</sup> SARS-CoV-2 virion is 60–140 nanometers and could theoretically enter the peritoneal cavity via hematogenous diffusion or through the PD catheter after touch contamination.

This observation of Vischini *et al.* if confirmed, is important for daily clinical care of PD patients and handling of effluents. However, they found positive polymerase chain reaction tests in PD effluents in their patient 1 month after the first symptoms, calling into question whether the virus itself was present or whether it was just noncontagious RNA fragments. In our experience with serial PD effluent samplings from 3 PD patients with mild to moderate active coronavirus disease 2019 (COVID-19), we found results discordant with those of Vischini *et al.* We used quantitative reverse transcription polymerase chain reaction analysis based on the highly specific *RdRp* gene and *E* gene, in 2 independent laboratories. Although nasopharyngeal swabs obtained at admission showed high viral load in all 3 patients (cycle threshold value <30), decreasing during hospitalization, none of the 11 PD effluent samplings at days 0–3–4–7 taken after a 12-hour dwell time tested positive, even after dialysate centrifugation. A blood sample was positive in only one patient (A. Candellier, A. Scohy, N. Gillet, *et al.*, submitted for

publication, 2020). Our data are also in line with the absence of SARS RNA in effluents from PD patients with SARS infection.<sup>3</sup>

The opposite results for both observations argue for performing a SARS-CoV-2 culture to confirm PD effluent contagiousness before imposing specific procedures in PD patients.

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3. Kwan BC-H, Leung C-B, Szeto C-C, *et al.* Severe acute respiratory syndrome in dialysis patients. *J Am Soc Nephrol.* 2004;15:1883–1888.

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## Kidney transplantation trends in South Korea during the COVID-19 pandemic



**To the editor:** We read with interest the article by Banerjee *et al.*<sup>1</sup> reporting 7 cases of coronavirus disease 2019 (COVID-19) in kidney transplant recipients. Banerjee *et al.*<sup>1</sup> raised concerns about increased susceptibility to COVID-19 infection during the postoperative period; however, the impact of immunosuppression on susceptibility to COVID-19 remains unknown. Recent data on clinical outcomes of COVID-19 infection in kidney transplant patients are conflicting.<sup>2</sup> Furthermore, some preliminary reports suggest the reduced immune response due to immunosuppression may provide a protective effect against severe COVID-19.<sup>3</sup>

South Korea was one of the earliest countries to experience the COVID-19 outbreak, quickly becoming the country with the second highest number of COVID-19 infections after China. In response, South Korea carried out extensive virus testing and contact tracing. In cooperation with national-level efforts, most transplant programs adopted universal donor and recipient screening using reverse transcriptase polymerase chain reaction, in accordance with the Korean Transplantation Society recommendation. Thus, national kidney transplant activities in South Korea remained stable for both living and deceased donor transplantation compared with the same period during the previous year (Table 1).

During these unprecedented times, little is known about the safety of kidney transplantation. However, delaying or halting of kidney transplantation is not a safe option for patients with end-stage renal disease. Because they still

**Table 1 | Kidney transplant activities in South Korea during the COVID-19 outbreak**

	January 1 to April 30, 2019	January 1 to April 30, 2020	Changes in transplant activities (%)
Deceased donors, <i>n</i>	152	162	+6.6
Kidney transplants, <i>n</i>	757	774	+2.2
Living donor	493 (65.1)	473 (61.1)	-4.1
Deceased donor	264 (34.9)	301 (38.9)	+14.0
Age, yr			
<40	152 (20.1)	145 (18.7)	-4.6
40-49	178 (23.5)	190 (24.6)	+6.7
50-59	278 (36.7)	249 (32.2)	-10.4
50-69	134 (17.7)	169 (21.8)	+26.1
≥70	15 (2.0)	21 (2.7)	+40.0

COVID-19, coronavirus disease 2019. Values are *n* (%) unless otherwise indicated. Data are from the Korean Network for Organ Sharing.

require lifesaving dialysis during the pandemic, these vulnerable patients are unable to practice social distancing and must travel to dialysis facilities.<sup>4</sup> Therefore, we should carefully weigh the risks and benefits of pursuing or postponing kidney transplantation, considering immediate medical circumstances.

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4. Kliger AS, Cozzolino M, Jha V, et al. Managing the COVID-19 pandemic: international comparisons in dialysis patients. *Kidney Int.* 2020;98:12-16.

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## Unusually high rates of acute rejection during the COVID-19 pandemic: cause for concern?



**To the editor:** The coronavirus disease 2019 (COVID-19) pandemic has caused unprecedented health care, economic, and psychosocial crises. We report a case series of 6 kidney and pancreas transplant recipients who presented

**Table 1 | Kidney and SPK transplant recipients admitted with acute rejection within 1 week of stay-at-home state orders during COVID-19 pandemic**

Pt	Sex	Age (yr)	Race	Time since transplant (yr)	Transplant type	Induction	Cause of ESRD	Maintenance IS	Scr baseline (mg/dl)	Nonadherence	Presentation	Scr at presentation (mg/dl)	Biopsy	Treatment	Outcomes
1	M	43	W	5	LUKT	rATG	PCKD	T/M/P	1.6	Yes	Nausea, vomiting	30	ND	None	Dialysis
2	M	37	AA	7	LUKT	IL-2 (-)	HTN	T/M/P	1.3	Yes	Nausea, vomiting	16	TCMR	Pulse steroids	Dialysis
3	M	38	W	11	SPK	rATG	DM	T/M/P	1	Yes	Nausea, vomiting	1.5	ND	None	Failed pancreas
4	F	22	W	5	DD	rATG	MCKD	T/M/P	0.9	Yes	Elevated UPC	1	ABMR	Pulse steroids i.v. Ig	
5	F	37	W	3	LUKT	rATG	HTN	T/M/P	1.5	Yes	Elevated creatinine	2.5	Mixed	Pulse steroids i.v. Ig	
6	F	59	AA	5	DD	rATG	HTN	T/L/P	2	Yes	Elevated creatinine	3	ABMR	Increase baseline IS	

AA, African American; ABMR, antibody-mediated rejection; COVID-19, coronavirus disease 2019; DD, deceased donor; DM, diabetes mellitus; ESRD, end-stage renal disease; F, female; HTN, hypertension; IL-2 (-), interleukin-2 blockade; IS, immunosuppression; LUKT, living unrelated kidney transplant; M, male; MCKD, medullary cystic kidney disease; ND, not done; PCKD, polycystic kidney disease; Pt, patient; rATG, rabbit antithymocyte globulin; Scr, serum creatinine; SPK, simultaneous pancreas-kidney transplantation; TCMR, T cell-mediated rejection; T/L/P, tacrolimus, leflunomide, prednisone; T/M/P, tacrolimus, mycophenolate, prednisone; UPC, urine protein-creatinine ratio; W, white.