Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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, *n*	152	162	+6.6
Kidney transplants, *n*	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.[4] Therefore, we should carefully weigh the risks and benefits of pursuing or postponing kidney transplantation, considering immediate medical circumstances.

1. Banerjee D, Popoola J, Shah S, et al. COVID-19 infection in kidney transplant recipients. *Kidney Int*. 2020;97:1076–1082.
2. The Columbia University Kidney Transplant Program. Early description of coronavirus 2019 disease in kidney transplant recipients in New York. *J Am Soc Nephrol*. 2020;31:1150–1156.
3. D'Antiga L. Coronaviruses and immunosuppressed patients: the facts during the third epidemic. *Liver Transpl*. 2020;26:832–934.
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.

Juhan Lee[1] and Kyu Ha Huh[1]

[1]*Department of Surgery, Yonsei University College of Medicine, Seoul, South Korea*

Correspondence: *Kyu Ha Huh, Department of Surgery, Yonsei University College of Medicine, Yonsei-ro 50, Seodaemun-gu, Seoul 03722, Korea. E-mail: KHHUH@yuhs.ac*

Kidney International (2020) **98,** 512–513; https://doi.org/10.1016/j.kint.2020.05.044

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.

in an unusually short time frame during the COVID-19 pandemic with transplant organ dysfunction and rejection (Table 1). Mean time from the time of transplant to the current presentation was 7.3 ± 4 years. Of these 6 patients, 3 had severe allograft dysfunction requiring initiation of dialysis or insulin therapy. Two had a previous history of missing clinic visits. All patients presented with nonadherence during the "stay-at-home" social distancing orders. As the general socioeconomic status of our population is slightly above the general transplant population in the United States, these findings are concerning.

Kidney transplant recipients infected with coronavirus have a significant risk of graft loss and death.[1–3] However, the psychosocial impact of the COVID-19 pandemic on graft and patient outcomes in non-COVID kidney transplant recipients is unclear. The federal and local governments have enforced confinement orders to mitigate the spread of infection, but these restrictions have also limited health care access to "essential visits" only. Posttransplant management of solid organ transplant recipients is further compromised by loss of health insurance for many patients and cost reduction strategies at transplant centers.

Our case series suggests that rigorous, medical, and psychosocial risk stratification strategies are needed to avoid untoward outcomes in stable solid organ transplant recipients. Despite, or because of, the current financial crisis, the government and transplant centers need to consider further investment in life-long immunosuppression coverage,[4] telehealth, mobile phlebotomy, noninvasive diagnostic tools, and person-power to keep their patients safe.

1. Akalin E, Azzi Y, Bartash R, et al. Covid-19 and kidney transplantation. *N Engl J Med*. 2020;382:2475–2477.
2. Banerjee D, Popoola J, Shah S, et al. COVID-19 infection in kidney transplant recipients. *Kidney Int*. 2020;97:1076–1082.
3. Columbia University Kidney Transplant Program. Early description of coronavirus 2019 disease in kidney transplant recipients in New York. *J Am Soc Nephrol*. 2020;31:1150–1156.
4. Kadatz M, Gill JS, Gill J, et al. Economic evaluation of extending Medicare immunosuppressive drug coverage for kidney transplant recipients in the current era. *J Am Soc Nephrol*. 2020;31:218–228.

Fahad Aziz[1], Brenda Muth[1], Sandesh Parajuli[1], Neetika Garg[1], Maha Mohamed[1], Didier Mandelbrot[1] and Arjang Djamali[1,2]

[1]*Division of Nephrology, Department of Medicine, University of Wisconsin–Madison School of Medicine and Public Health, the University of Wisconsin Hospital and Clinics, Madison, Wisconsin, USA; and* [2]*Division of Transplantation, Department of Surgery, University of Wisconsin–Madison School of Medicine and Public Health, the University of Wisconsin Hospital and Clinics, Madison, Wisconsin, USA*

Correspondence: *Fahad Aziz, 1685 Highland Avenue, Mail Code 2281, Madison, Wisconsin 53705–2281, USA. E-mail: faziz@wisc.edu*

Kidney International (2020) **98,** 513–514; https://doi.org/10.1016/j.kint.2020.05.038

Clinical evidence of direct bone effects of cinacalcet

To the editor: Calcimimetics constitutes a cornerstone in the medical therapy of secondary hyperparathyroidism and its complications, including bone disease.[1] The extracellular calcium-sensing receptor is expressed in the parathyroid glands and kidneys, but also on bone cells, where it regulates skeletal homeostasis. Recent experimental data demonstrate direct bone actions of calcimimetics, independent of parathyroid hormone (PTH) suppression.[2] To confirm these data in humans, we performed a *post hoc* analysis on data collected in the frame of prospective, observational studies in patients referred for kidney transplantation.[3] Patients receiving cinacalcet (cases, $n = 65$) were randomly matched 3:1 on PTH levels to patients free of cinacalcet (controls, $n = 166$). PTH, calcium, and phosphate levels were comparable, whereas bone-specific alkaline phosphatase, intact procollagen type I N-terminal propeptide, and tartrate-resistant acid phosphatase type 5b were significantly higher in cases versus controls (Figure 1). In the overall cohort ($n = 605$), treatment with cinacalcet was a significant determinant of bone-specific alkaline phosphatase, procollagen type I N-terminal propeptide, and tartrate-resistant acid phosphatase type 5b levels, independent of age, gender, weight, dialysis modality, diabetes, and PTH ($P < 0.01$). In aggregate, our data support direct and PTH-independent effects of cinacalcet on bone turnover. Results are compatible with enhanced bone formation and resorption and align with the divergent effects of calcimimetics on PTH and bone turnover markers seen in clinical trials.[4] Clinicians should be aware that PTH levels tell a different story concerning bone health depending on whether they are reduced by cinacalcet therapy or not. Additional studies are required to determine whether this effect holds true for direct activators of the calcium-sensing receptor.

DISCLOSURE

PE reports grants and personal fees from Amgen, outside of the submitted work; EC reports personal fees from IDS, outside of the submitted work. The other author declared no competing interests.

ACKNOWLEDGMENTS

HSJ is supported by a European Renal Association–European Dialysis and Transplant Association long-term fellowship.