Letter to the editor

Korean J Transplant 2022;36:159-163
https://doi.org/10.4285/kjt.22.0025

KJT
KOREAN JOURNAL OF TRANSPLANTATION

pISSN 2671-8790
eISSN 2671-8804

Received May 13, 2022
Revised June 7, 2022
Accepted June 7, 2022

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COVID-19 among solid organ transplant recipients in Korea: surveillance data of the Korean Transplantation Society, January 2020 to March 2022

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Dear Editor:

Since the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was first reported in China in December 2019, the virus has spread worldwide, and the coronavirus disease 2019 (COVID-19) pandemic remains ongoing [1]. However, there are no published reports on the incidence rate and clinical outcomes of COVID-19 among Korean solid organ transplant (SOT) recipients, a high-risk group for severe COVID-19 [2,3]. Since January 2020, the Korean Transplantation Society has been collecting information on cases of SARS-CoV-2 infection in SOT recipients through members' voluntary reports. According to the Korean government's strategy, confirmed cases are defined as those with a positive result by real-time reverse-transcription polymerase chain reaction (RT-PCR) tests before March 14, 2022, and those with positive RT-PCR or rapid antigen test results after March 15, 2022. In South Korea, the first patient infected with the Omicron variant was identified on November 24, 2021, after which the Omicron variant spread rapidly and became predominant. We summarize the descriptive data collected. A total of 628 confirmed COVID-19 cases in SOT recipients were reported between January 2020 and March 2022. The demographic and clinical characteristics of the 628 patients are shown in Table 1. The majority of SOT recipients (58.4%) were male, and the median age at

Table 1. Characteristics of solid organ transplant recipients with COVID-19

Characteristic	Case (n=628)
Sex	
Male	364 (58.0)
Female	259 (41.2)
Unknown	5 (0.8)
Age (yr)	
<20	24 (3.8)
20–49	174 (27.7)
50–59	169 (26.9)
60–69	200 (31.8)
≥70	61 (9.7)
Organ transplantation type	
Kidney	498 (79.3)
Liver	105 (16.7)
Heart[a)]	13 (2.1)
Lung	11 (1.8)
Pancreas	1 (0.2)
Site of isolation and treatment	
Hospital	309 (49.2)
Community health center	7 (1.1)
Self-quarantine	271 (43.2)
Unknown	41 (6.5)
Clinical course	
Full recovery and release from quarantine	438 (69.7)
Ongoing treatment/follow-up information required	99 (15.8)
Death	13 (2.1)
Unknown	78 (12.4)

Values are presented as number (%).

COVID-19, coronavirus disease 2019.

[a)]In one case, simultaneous heart and kidney transplantation was performed.

the time of infection was 57.0 years (interquartile range, 45.0–64.0 years). Kidney transplantation (79.3%) was the most common organ transplantation type, followed by liver transplantation (16.7%), heart transplantation (2.1%), lung transplantation (1.8%), and pancreas transplantation (0.2%). During the 24-month period from January 2020 to December 2021, 11.5 cases per month were reported, whereas 117.7 cases per month were reported during the 3 months from January 2022 to March 2022 (as of January 2022, when the Omicron variant became predominant in Korea) (Fig. 1). During the same period, the total number of confirmed cases in the Korean population was 635,253 (26,468.9 cases per month) until December 2021 and 12,740,565 (4,246,855 cases per month) from January to March 2022.

In the period until December 2021, 85.5% (235/275) of cases were hospitalized, whereas from January to March 2022, self-quarantine was the most common site of isolation and treatment (71.7%, 253/353). Eleven cases (2.1%) were reported to be fatal, corresponding to a higher mortality rate than among members of the general population diagnosed with COVID-19 in Korea aged 50–59 years (0.04%) and 70–79 years (0.68%) [4].

This study is the first to report the epidemiology and clinical outcomes of COVID-19 in Korean SOT recipients. However, voluntary reporting-based surveillance data may be underreported, particularly in the context of a rapidly spreading epidemic [5]. Despite the limitations of the data collected, we observed higher mortality in SOT recipients with COVID-19. Further studies are needed to accurately evaluate the epidemiology and risk of severe infection in SOT recipients in Korea.

https://doi.org/10.4285/kjt.22.0025

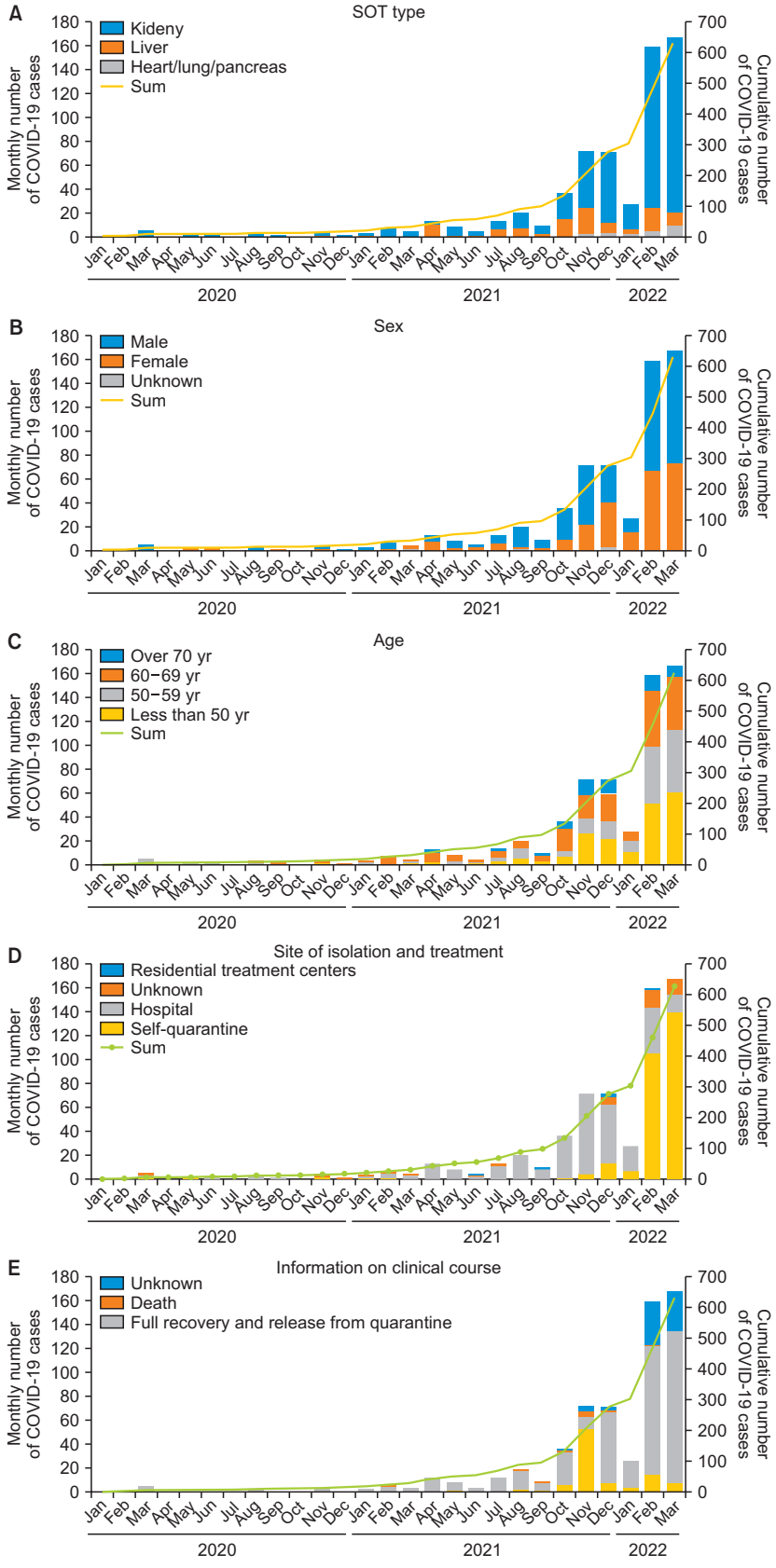

Fig. 1. The monthly number of coronavirus disease 2019 (COVID-19) cases in solid organ transplant (SOT) recipients in Korea, (A) by SOT type, (B) by sex, (C) by age, (D) by site of isolation and treatment, and (E) by clinical course.

ACKNOWLEDGMENTS

Conflict of Interest
No potential conflict of interest relevant to this article was reported.

Funding/Support
This study was supported by research grant from the Korean Society for Transplantation (2022-00-03002-007).

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Additional Contributions
We appreciate the cooperation of all hospitals in Korea that reported SOT recipients with SARS-CoV-2 infection. Hospitals and representatives who reported patients are as follows. Ajou Univ. Hospital (Dr. Bang Jun Bae, Dr. Lee Min Jeong, Co. Jang Eun Kyoung), Asan Medical Center (Dr. Choi Ho Jeong), Bucheon Sejong Hospital (Dr. Lee Sook Jin), Catholic Kwandong Univ. International St. Mary's Hospital (Dr. Park Je Hoon), Cha Univ. Bundang Medical Center (Co. Lee Eun Ran), Chonnam National Univ. Hospital (Dr. Kim Chang Seong, Dr. Choi Soo Jin Na), Ewha Womans University Mokdong Hospital (Dr. Kim Kyung Jin, Dr. Chung Ku Yong), Gacheon Univ. Gill Medical Center (Dr. Ro Han), Gangnam Severance Hospital (Co. Kim Hee Young, Dr. Son Sun Young), Gyeonsang National Univ. Hospital (Dr. Kim Hyun Jeong), Hallym Univ. Kangnam Sacred Heart Hospital (Dr. Kim Do Hyoung), Hanseo Hospital (Dr. Kwon Hyu Kyong), Inje Univ. Busan Paik Hospital(Dr. Kim Young Hoon, RN. Jeong Ji Won, RN. Jeong Ji Won, RN. Jang Hye Yeon), Jeonbuk National Univ. Hospital (Dr. Lee Sik), Kangdong Sacred Heart Hospital (Co. Kim Haeng Suk), Keimyung Univ. Dongsan Medical Center (Co. Kim Min Ae, Dr. Han Seung Yeup), Konkuk Univ. Medical Center (Co. Seo Hye Jin), Korea Univ. Anam Hospital (Dr. Kim Dong Sik, Co. Kim Miim, RN. Kim Seo Jin), Korea Univ. Guro Hospital (Dr. Park Pyoung Jae), Kyung Hee Univ. Medical Center (Dr. Kong Ji Yoon), Kyungpook National Univ. Hospital (Dr. Noh Hee won, Dr. Park Sun Hee), Maryknoll Hospital (Dr. Ahn Jeong Myung), Myongji Hospital (Co. Won Yoo Jin), Pusan National Univ. Hospital (Dr. Lee Hye Won, RN. Jeon So Young), Pusan National Univ. Yangsan Hospital (Dr. Kim Seo Rin, Dr. Lee Soo Yong, Dr. Choi Byung Hyun), Samsung Medical Center (Co. Kim Bok Nyeo, Co. Baek Sun Mi), Seoul National Univ. Bundang Hospital (Dr. Jeong Jong Cheol, Co. Jo Su Jin), Seoul National Univ. Hospital (Dr. Min Jee Su, Dr. Yi Nam Joon, Co. Lee Seung Hyun, Co. Jeon Ji Yeon, Dr. Choi Sun Mi, Co. Ha Ji Ye), Severance Hospital (Dr. Kim Song Yee, Co. Bae Hyun A, Co. Yoo Se Woong, Co. Lee Sena, Co. Lee Ji Eun, Co. Jeon Kyung Ock, Dr. Joo Dong Jin, Co. Choi Ji Yeon, Dr. Huh Kyu Ha, Co. Huh Ji Hye), SMG-SNU Boramae Medical Center (Dr. Lee Jeong Pyo, Dr. Jang Yun Young), Soonchunhyang Univ. Hospital Cheonan (Co. Kang Eun Young), Soonchunhyang Univ. Hospital Seoul (Co. So Min Ju), The Catholic Univ. of Korea Bucheon St. Mary's Hospital (Dr. Min Ji Won, Co. Oh Ji Hyoung), The Catholic Univ. of Korea Eunpyeong St. Mary's Hospital (Dr. Ban Tae Hyun), The Catholic Univ. of Korea Incheon St. Mary's Hospital (Dr. Yoon Hye Eun), The Catholic Univ. of Korea Seoul St. Mary's Hospital (Dr. Yang Chul Woo), The Catholic Univ. of Korea St. Vincent's Hospital (RN. Kim Ji Eun, RN. Yu Hye Kyung), The Catholic Univ. of Korea Yeouido St. Mary's Hospital (Dr. Koh Eun Sil), Ulsan Univ. Hospital (Dr. Park Kyung Sun, Dr. Park Sang Jun, Dr. Park Ho Jong).

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