

LETTER TO THE EDITOR

COVID-19–related collapse of transplantation systems: A heterogeneous recovery?

To the Editor:

The coronavirus disease 2019 (COVID-19) pandemic has pushed healthcare systems to the limit worldwide. Hospital resources have been compromised, especially in intensive care units (ICUs). Regarding that, some nephrologists have alerted us about the potential shortages of our ability to deliver kidney replacement therapy to all patients who need it.¹ Simultaneously, two reports have highlighted the collapse of organ transplantation figures in several countries such as France (91%), the United States (51%), and Spain (87%), mainly due to a reduction in the number of transplants from deceased donors.^{2,3} Other countries, such as Italy, have also detected a pronounced reduction, although procured at the national level. Throughout the world, most healthcare systems have adapted to avoid the spreading of the infection and to deliver the usual healthcare for most patients. Specific recommendations have been developed for surgical and transplant teams.^{5,6} Along with the importance of following strict detection and isolation measures, splitting the hospitals into COVID-19–positive and COVID-19–negative areas with specific dedicated teams of healthcare professionals have allowed preservation of some activities such as organ transplantation.

Cantabria is a Spanish region with a current intermediate COVID-19 incidence of 4.7 cases/1000 inhabitants. Due to the risk of prompt saturation of the healthcare system and, especially, of the intensive care unit (ICU) of our hospital, at the beginning of the pandemic the kidney transplant team decided to perform only deceased donor kidney transplants for hypersensitized patients. Two weeks after splitting the hospital and applying strict screening and isolation measures to all admitted patients, the hospital situation improved and the transplant team decided to restart the transplant activity for deceased donor kidney transplantation. After that, the number of kidney transplantations increased from 0.7/wk to 2.4/wk, whereas national transplant activity remained extremely low (Figure 1). This accounts for a total of 15 kidney transplantations in an 8-week period, whereas the mean number of transplantations in the same period for the previous 5 years was 6.4 procedures. Most of these procedures were performed using a kidney from a donor outside Cantabria through the “Organización Nacional de Trasplantes” (ONT).

Although the reduction in transplantation rates has been globally distributed, Loupy et al³ suggested that some transplant procurement organizations can recover faster than others. This faster recovery can be due not only to the reduction in the COVID-19

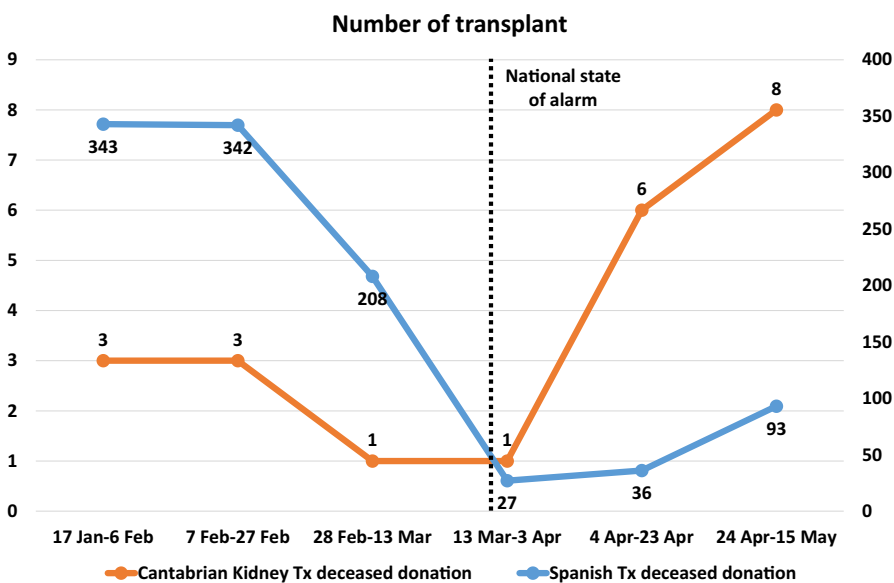


FIGURE 1 Number of transplant procedures from deceased organ donors in Spain (blue line) and number of kidney transplants from deceased organ donors in Cantabria (orange line)

rate but also to the best hospital practices. In this sense, we would like to highlight that the changes made in the hospital organization were effective in reducing the burden on the healthcare system and, especially, on the ICU. Related to that, the whole transplant team rapidly adapted from a low activity situation to a big increase in the number of transplants above the usual. A considerable number of optimal donor organs were offered through the ONT and our center was able to accept most of them. Otherwise, these organs would have been discarded. Finally, having a national organization such as ONT allowed quick identification of those centers like ours, among others in Spain, that could resume the transplant activity at a faster pace in order to use potential deceased donor organs that could have been lost.

KEYWORDS

clinical research/practice, health services and outcomes research, infection and infectious agents – viral, infectious disease, kidney transplantation/nephrology, organ acceptance

DISCLOSURE

The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation*.

Emilio Rodrigo¹ 

Eduardo Miñambres² 

José L. Gutiérrez-Baños³

Rosalía Valero¹

Lara Belmar¹

Juan C. Ruiz¹ 

¹Service of Nephrology, University Hospital Marqués de Valdecilla-IDIVAL, School of Medicine, University of Cantabria, Santander, Spain

²Transplant Coordination Unit & Service of Intensive Care, University Hospital Marqués de Valdecilla-IDIVAL, School of Medicine, University of Cantabria, Santander, Spain

³Service of Urology, University Hospital Marqués de Valdecilla-IDIVAL, School of Medicine, University of Cantabria, Santander, Spain

Correspondence

Emilio Rodrigo

Email: nefrce@hum.es

ORCID

Emilio Rodrigo  <https://orcid.org/0000-0002-2845-5272>

Eduardo Miñambres  <https://orcid.org/0000-0002-0466-044X>

Juan C. Ruiz  <https://orcid.org/0000-0002-7904-8730>

REFERENCES

1. Goldfarb DS, Benstein JA, Zhdanova O, et al. Impending shortages of kidney replacement therapy for COVID-19 patients. *Clin J Am Soc Nephrol*. 2020;15(6):880-882.
2. Domínguez-Gil B, Coll E, Fernández-Ruiz M, et al. COVID-19 In Spain: transplantation in the midst of the pandemic [published online ahead of print 2020]. *Am J Transplant*. 2020:1-5. <https://doi.org/10.1111/ajt.15983>.
3. Loupy A, Aubert O, Reese PP, et al. Organ procurement and transplantation during the COVID-19 pandemic. *Lancet* 2020;395(10237):e95-e96.
4. Angelico R, Trapani S, Manzia TM, et al. The COVID-19 outbreak in Italy: initial implications for organ transplantation programs [published online ahead of print]. *Am J Transplant*. <https://doi.org/10.1111/ajt.15904>.
5. Søreide K, Hallet J, Matthews JB, et al. Immediate and long-term impact of the COVID-19 pandemic on delivery of surgical services. *Br J Surg*. 2020. <https://doi.org/10.1002/bjs.11670>.
6. Summary of Spanish recommendations regarding organ donation and transplantation in relation to the COVID-19 outbreak. <http://www.ont.es/infesp/RecomendacionesParaProfesionales/Spanish%20Recommendations%20on%20Organ%20Donation%20and%20Transplantation%20COVID-19%20%20ONT.pdf>