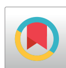
The "New Caledonia COVID-19 Paradox": Dramatic Indirect Impact of the Pandemic on Organ Donation and Transplantation in a Nonprevalence Country



To the Editor With 270,000 inhabitants, New Caledonia has a very high prevalence of end-stage kidney disease, with the fourth highest globally. New Caledonia started a deceased- and live-donor kidney transplantation program 5 years ago.[1,2] After the first positive cases of COVID-19 were diagnosed on March 18, 2020, the New Caledonian government halted all flights. It mandated a strict 14-day quarantine period for all returning visitors and residents in a government-designated hotel. All COVID-19–positive individuals were hospitalized, even if they were asymptomatic. An extensive screening program was implemented with an average COVID-19 reverse transcriptase polymerase chain reaction test of 14,800 per million. Among 19,544 tests, only 40 cases were positive (35 imported and 5 secondary cases). Data showed that COVID-19 did not circulate among the population.[1] Only a small number of imported cases were diagnosed in the context of a comprehensive screening policy and strict isolation rules, with no new cases detected since March 31, 2020. This government policy was very effective in protecting the country from the direct consequences of COVID-19, but it dramatically impacted kidney transplantation. Because of border closures, no patient could be transplanted through the Australian and New Zealand Paired Kidney Exchange program. Only 11 kidney transplants were performed in 2020 compared with an average of 23 transplants for the 4 preceding years, representing a nearly 50% drop in transplant activities (Figure 1, Supplementary Table S1).

The indirect impact of the pandemic was even more than reported for countries with authenticated epidemics.[3,4] Multiple factors explain this New Caledonian COVID-19 paradox. First, halting elective surgeries was deleterious on the newly established living-donor transplant program established less than 1 year prior in almost complete autonomy. Second, the reduced mobility of surgeons from expert centers in France and Australia was also an essential factor. Finally, patients could not travel to France or Australia for the more complex living-donor transplants that could not be performed locally in New Caledonia. This COVID-19 collateral effect on kidney transplantation was

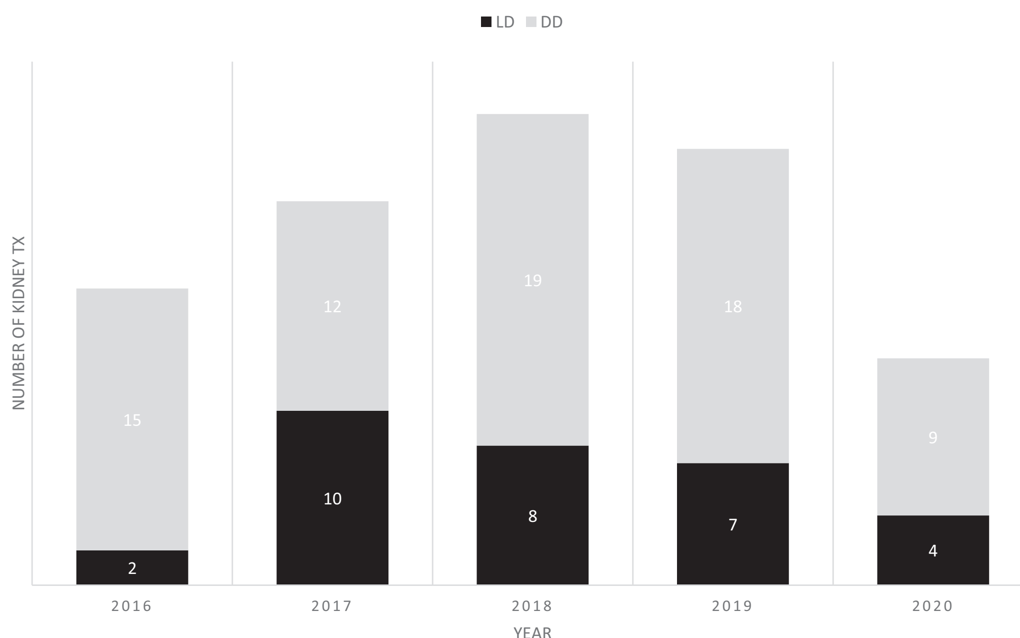


Figure 1. Evolution of the number of kidney transplants (TX) of New Caledonia patients by donor type and location of the transplant surgery. DD, kidney transplantation from a deceased donor; LD, kidney transplantation from a living donor.

much more deleterious than the direct effect of the COVID-19 epidemic itself. The 2020 COVID-19 pandemic protective closure measures nipped this country's local kidney transplant program in the bud.

DISCLOSURE

All the authors declared no competing interests.

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SUPPLEMENTARY MATERIAL

Supplementary File (PDF)

Table S1. Kidney transplantation activity in New Caledonia in 2020 compared with the period from 2016 to 2019.

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