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Letter to the Editor: Lessons Learned from Exposure to COVID-19 in Hemodialysis Patients

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Dear Editor,

The COVID-19 pandemic, caused by a new coronavirus, is a major life-threatening health problem (1), especially for chronic dialysis patients (2). Somehow, mortality caused by SARS-CoV-2 infection was significantly higher in patients with renal failure on dialysis treatment than in the general population, with 10% to 41% on average (3, 4). This finding is due to the vulnerability of this population owing to immunosuppression and multiple comorbidities such as diabetes or cardiovascular disease. Globally, the number of people on dialysis is increasing, and approximately 89% of this vulnerable population is on hemodialysis (HD) (5). In high-income countries, the incidence of patients on dialysis is static or even declining (6), while it is dramatically increasing in low-income countries, both because of the increasing prevalence of non-communicable diseases leading to chronic kidney disease (CKD) and because of the growing affordability of kidney replacement therapy (7).

Kidney transplantation offers a better quality of life, longer survival, and lower costs than dialysis for this vulnerable population (8). However, in low- and middle-income countries, kidney transplantation is such rarely available that patients depend entirely on HD (7). In fact, during the COVID-19 pandemic, these patients faced complex problems and unforeseen challenges, including exposure to COVID-19 during transport to their hemodialysis centers and the risk of nosocomial transmission in these units given the need to travel frequently to care centers for treatment or the inability to maintain social distancing during transport and dialysis sessions (3, 9).

The exposure of these patients to COVID-19 poses a higher risk of serious complications and death (10, 11). In this regard, recommendations and strategies for prevention, mitigation, and containment have been implemented in hemodialysis centers.

Unfortunately, current recommendations for managing patients with COVID-19 and acute kidney injury (AKI) have been drawn largely from studies conducted in high-income countries (12). At the same time, in the health context of chronically underfunded healthcare systems, providing adequate resources for implementing these guidelines can be a significant challenge in many low- and middle-income countries (13). The results of several studies have shown that patients with the end-stage renal disease living in poor areas have a high risk of exposure to SARS-CoV-2 (14), and gross inequalities were found globally between the two shores in the management of chronic hemodialysis patients during the pandemic (15).

Inequality in Exposure to COVID-19 in Transport

Transportation can be a barrier to the accessibility of many healthcare services (16). Access to transport is a determinant of access to care for hemodialysis patients, given the frequency of their visits to dialysis centers (11). Most of these patients cannot get to dialysis independently, either by using public transport or taxis (17), which increases their exposure to COVID-19 and, thus, their fear. A recent study showed that the fear of contracting COVID-19 on the way to dialysis units is greater than during dialysis sessions (11). Another study showed that many people forgo transport public transport to avoid potential exposure to COVID-19, while the poor have compromised access to health care for fear of public transport (18). In this regard, several studies have proposed to use of private and individual vehicles as a measure to prevent the spread of

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COVID-19, instead of public transport (1, 19-21), which is not available for all patients in all countries, especially in low- and middle-income countries.

Indeed, during the pandemic, transport to and from the hemodialysis units was deemed more difficult for 31% of respondents in the hemodialysis units of low-income countries and 38% in low- and middle-income countries, compared to 16% and 19% in middle-income countries and high-income countries, respectively (15). Several studies have recommended applying infection control measures: physical distancing, hygiene, and hand washing before and after entering the vehicle and offering shuttles between trips (9, 22). These good practices are effective means of limiting the spread of the pandemic. In poorer societies, these simple measures may not be realized (23).

Inequality in the Exposure to COVID-19 in Dialysis Units

In this epidemic period, there is a high risk of nosocomial transmission that threatens hemodialysis units due to the high number of patients and visitors entering and leaving these units (2). Indeed, dialysis carries the risk of spreading COVID-19 among patients by medical means: Devices, beds, droplets, or aerosols (24), given that the main routes of transmission of COVID-19 are the inhalation of infectious droplets and close contact (2).

Hemodialysis patients should be considered infection carriers because of their frequent visits to hemodialysis centers (25). In fact, before arriving at the dialysis department, they may cross high-risk areas (1), which increases the risk of COVID-19 exposure (11). In this regard, several recommendations have been proposed, such as home dialysis (26) and monthly laboratory analysis (27), which might be an exciting solution. However, this remains difficult to achieve in low- and middle-income countries: Contexts with minimal resources and the inability to meet the requirements of this process.

Telemedicine and teleconsultation have also been implemented to reduce medical contact with patients (28). However, they require advanced digital technology and extensive training for healthcare professionals and patients to properly master these new skills (29), which is not the case in developing countries and remote areas (15). Unfortunately, there have been striking global inequalities in the care of chronic hemodialysis patients during the pandemic, which has disproportionately characterized low- and middle-income countries (15). The pandemic is a stark reminder of the gap between countries and between those who can afford health care and those who cannot (23).

Lessons Learned

Zoonosis continues to threaten humanity with imminent potential for panic and fear that affects and disrupts daily life (23). One of the lessons learned from the SARS-CoV-2 outbreak is how effectively well-resourced environments can respond to health crises (29). We believe that urgent action is needed to reduce the inequalities that glaringly exist between low- and middle-income countries, primarily addressing pre-existing vulnerabilities (15), and greater investment in public health, particularly in less developed countries where population density is high and the healthcare systems are the least developed (23). We have also learned that all nations must work together for the good of humanity and stop blaming each other in these uncertain times (23). Also, COVID-19 is an opportunity to reflect on how the world can center justice and equity in its efforts to universalize care. Governments should use this opportunity to invest in controlled changes to reduce persistent gaps in access to care, especially for vulnerable populations, such as hemodialysis patients, because these gross inequalities in health care are unacceptable in the era of globalization.

Footnotes

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