COVID-19 and Impending Shortage of Haemodialysis Facilities due to the Rising Incidence of Acute Kidney Injury Requiring Renal Replacement Therapy

Sir,

Around the globe, nations are striving hard to combat the pandemic of COVID-19, which is ruthlessly engulfing precious lives of humankind, ranging from neonates to geriatric individuals with no discrimination of gender, race, ethnicity, religion or geographical boundaries. Human beings have survived numerous pandemics in the past, like swine flu, ebola, and polio etc; but COVID-19 has had the worst economic impact pushing the world back by decades.

COVID-19 spreads from one individual to the next through direct contact, hand shaking, touching surfaces contaminated with the virus via tiny respiratory droplets of the infected individuals. Due to its highly contagious nature and spread, there is a huge surge in demand of personal protection equipment (PPE) throughout the world and, more so, in the healthcare settings, where healthcare providers are on the frontline. Despite being at most risk due to direct contact with suspected or diagnosed patients, huge shortage of PPE is being observed even in resource-rich countries.

The disease process of COVID-19 presents with the most common respiratory symptoms including cough, shortness of breath and complicating acute respiratory failure, even requiring the assistance of mechanical ventilation in most severe cases. This has led to the global shortage of medical equipment, including both ventilators and non-invasive respiratory support devices to supply oxygen to the compromised lungs. Low cost, urgent use ventilators are being designed and put into clinical assessment for fluid status, urine output measurement, and daily monitoring of renal functions of those with previous comorbidities (e.g. chronic kidney disease, prior transplant, diabetes mellitus, cardiac failure), or taking nephrotoxic drugs (e.g. non-steroidal anti-inflammatory drugs, blood pressure lowering drugs, diuretics) are mandatory in early identification of renal involvement.

Once renal involvement is identified, earlier interventions to provide maximal medical supportive therapy and avoidance of further renal insults, by keeping patient well hydrated and avoiding or minimizing nephrotoxic drug therapies during hospital stay, may help avoid advanced AKI.

Given the high incidence of patients developing AKI, above strategies must be accompanied by availability of haemodialysis machines and staff within Intensive care units, because of potential spread of COVID-19 virus once such patients are shifted to haemodialysis units for therapy.

Above all, it is highly recommended to get earlier input of nephrologists in more precise decision-making. By applying principle of “prevention is better than cure”, we can help in reducing mortality.

CONFLICT OF INTEREST:
Authors declared no conflict of interest.
AUTHORS’ CONTRIBUTION:
RA: Conception, drafting and write-up.
HS: Concept and write-up.

REFERENCES


Raheel Ahmed and Abdul Haseeb
Department of Nephrology and Renal Transplantation, Institute of Kidney Diseases, Hayatabad, Peshawar, Pakistan
Correspondence to: Dr. Raheel Ahmed, Department of Nephrology and Renal Transplantation, Institute of Kidney Diseases, Hayatabad, Peshawar, Pakistan
E-mail: azo.koko@gmail.com

Received: April 22, 2020; Revised: May 13, 2020; Accepted: June 27, 2020