LETTER TO THE EDITOR

Emergent Management of Severe Hyperkalemia and Volume Overload in a Maintenance Hemodialysis Patient With Castor Oil and Enemas in the Absence of Accessible Hemodialysis

To the Editor:

The COVID-19 pandemic resulted in substantial medical and social upheaval.[1,2] In Colombia, a social crisis ensued when the Colombian government made the decision to close economic gaps by increasing taxes. In protest, counter-government groups took control of the main roads and intermunicipal highways, completely blocking traffic, including medical missions,[3–5] resulting in an inability of patients, including those dependent on hemodialysis, to receive essential medical care.

An anuric hemodialysis-dependent man in his late 60s presented with fluid overload and hyperkalemia to a community hospital where dialysis was unavailable 4 days after his last hemodialysis session. He usually received dialysis in the inaccessible city of Cali, Colombia. At the time of hospitalization, his serum potassium was 7.9 mEq/L (Table 1). Of note, most blood pressure medications and all potassium binders also were unavailable at this hospital.

After a phone consultation, we implemented the following interventions, recognizing that these were the only options available at the time. These included β-agonists via nebulizer, a dihydropyridine calcium channel blocker, and minoxidil. Despite this, hypertension and hypervolemia persisted with potassium increasing to 8.8 mEq/L and oxygen saturation dropping. In this setting, we initiated enemas every 15 minutes as well as oral castor oil, 1 ounce every 12 hours, RRM. With the enemas and oral castor oil, we were able to temporize him for 5 days, with marked improvement in blood pressure and volume status as well as potassium dropping to 6.4 mEq/L with a resolution of electrocardiogram changes after 30 hours of treatment initiation. Nine days after his last hemodialysis session, he was able to resume hemodialysis.

These measures, although representing a desperate measure, proved effective in allowing our patient sufficient time until he could receive hemodialysis.

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REFERENCES

1. Ramírez Marmolejo R, Aristizábal Gómez LY, Gómez Franco LM, Dueñas Suarez EP, Ramírez Isaza S, Soto Carvajal MP. Advance voluntary directive versus distanasia in the care of the elderly with COVID-19 and kidney disease. *Rev Colomb Nefrol*. 2020;7(2):17-29 [in Spanish]. doi:10.22265/acnef.7.2.519
2. Ramírez Marmolejo R, Yomayusa González N, González González CA, et al. Colombian consensus of experts on evidence-informed recommendations for the management of SARS-CoV-2/COVID-19 infection in multimorbid older adults with chronic kidney disease. *Rev Colomb Nefrol*. 2021;8(2):e525 [in Spanish]. doi:10.22265/acnef.8.2.525
3. Soto SA. Empresas del Valle del Cauca, las más afectadas por el Paro Nacional [Companies from Valle del Cauca, the most affected by the National Strike]. La Republica. May 19, 2021. https://www.larepublica.co/especiales/los-costos-del-paro/empresas-del-valle-del-cauca-las-mas-afectadas-por-el-paro-nacional-y-los-bloqueos-3171829
4. Governorate of Valle del Cauca. Mapas y territories [Maps and territories]. May 16, 2018. https://www.valledelcauca.gov.co/publicaciones/60137/mapas-y-territorios/
5. Semana. Estos son los 21 bloqueos en vías del Valle que tienen aislado al departamento [These are the 21 roadblocks in the Valley that have isolated the department]. May 15, 2021. https://www.semana.com/nacion/articulo/estos-son-los-21-bloqueos-en-vias-del-valle-que-tienen-aislado-al-departamento/202122/

Table 1. Key laboratory and examination data

Time	Weight (kg)	SpO_2	K (mEq/L)	Blood Pressure (mm Hg)	ECG
Admission	82	92%	7.9	198/112	Peaked T waves in V1-V2
Day 1 of enemas	83	76%	8.8	212/116	—
+12 h	81	84%	—	186/110	—
+20 h	80	—	—	—	—
+24 h	—	86%	7.4	174/106	—
+30 h	78	94%	6.4	168/94	Resolved

Abbreviations: ECG, electrocardiogram; K, potassium; SpO_2, oxygen saturation.