

Kidney360

April 2020 • Vol. 1 • No. 4

Patient Perspective

- 227** **Raising the Volume on Alport Syndrome: A Patient Perspective**
Megan E. Dunleavy

Editorial

- 229** **Does Vascular Access Type Affect Access-Related Costs?**
Mae Thamer

Original Investigations

Acute Kidney Injury and ICU Nephrology

- 232** **Fluid Overload and Mortality in Patients with Severe Acute Kidney Injury and Extracorporeal Membrane Oxygenation**
Samantha Gunning, Fouad Kutuby, Rebecca Rose, Sharon Trevino, Tae Song, and Jay L. Koyner

Chronic Kidney Disease

- 241** **Housing Insecurity and Risk of Adverse Kidney Outcomes**
Tessa K. Novick, Chiazam Omenyi, Dingfen Han, Alan B. Zonderman, Michele K. Evans, and Deidra C. Crews

Dialysis

- 248** **The Effect of Risk of Maturation Failure and Access Type on Arteriovenous Access-Related Costs among Hemodialysis Patients**
Sarah D. Kosa, Amiram Gafni, Lehana Thabane, and Charmaine E. Lok

Glomerular and Tubulointerstitial Diseases

- 258** **Venous Thrombotic Events in ANCA-Associated Vasculitis: Incidence and Risk Factors**
Bradley Isaacs, Eric J. Gapud, Brendan Antiochos, Philip Seo, and Duvuru Geetha

Mineral Metabolism

- 263** **Sucroferric Oxyhydroxide as Part of Combination Phosphate Binder Therapy among Hemodialysis Patients**
Donald A. Molony, Vidhya Parameswaran, Linda H. Ficociello, Claudy Mullon, and Robert J. Kossman

Global Perspectives

- 273** **Management of Hemodialysis Patients with Suspected or Confirmed COVID-19 Infection: Perspective of Two Nephrologists in the United States**
Michele H. Mokrzycki and Maria Coco

Perspective

- 279** **Buttonhole Cannulation of Arteriovenous Fistulas: a Dialysis Nurse's Perspective**
Margaret Bushey

Review Articles

281 Sodium-Based Osmotherapy in Continuous Renal Replacement Therapy: a Mathematical Approach

Jerry Yee, Naushaba Mohiuddin, Tudor Gradinariu, Junior Uduman, and Stanley Frinak

292 Targeting Inflammation in Diabetic Kidney Disease: Is There a Role for Pentoxifylline?

David J. Leehey

300 Clinical Applications of Genetic Discoveries in Kidney Transplantation: a Review

Ethan P. Marin, Elizabeth Cohen, and Neera Dahl

306 Buttonhole Cannulation of Arteriovenous Fistulas in the United States

Tushar J. Vachharajani, Leslie Wong, Vandana D. Niyyar, Kenneth D. Abreo, and Michele H. Mokrzycki

Clinical Images in Nephrology and Dialysis

314 Abdominal Pain in a Patient with Asymmetry

Jose R. Weisinger and Michael Freundlich

316 AKI in a Patient with Cerebral Toxoplasmosis

Jayesh Patel and Sarat Kuppachi

On the Cover

Model of sodium-based osmotherapy using pre-dilution continuous venovenous hemofiltration. The extracorporeal circuit is comprised of a hemofilter and replacement fluid. The hemofilter plasma inflow rate (Q_P) is advected by a sodium-adjusted-replacement fluid (Na_{RF2}). The sodium concentration gradient, $\nabla Na(t)$, equals the [Na]-difference between Na_{RF2} and $P_{Na}(t)$. $NaAR$ is defined by sodium ion dialysance (D_{Na}), time (t), and total body water volume (V). Hemofilter effluent equals the sum of Q_{RF2} and net ultrafiltration rate (Q_{UF}). Figure 1 from Sodium-Based Osmotherapy in Continuous Renal Replacement Therapy: A Mathematical Approach by Jerry Yee, Naushaba Mohiuddin, Tudor Gradinariu, Junior Uduman, and Stanley Frinak. KIDNEY360 1: 281–291, 2020. doi: KID.0000382019.

Abbreviations:

[Na], sodium concentration; $\nabla Na(t)$, [Na]-gradient at time (t), or $P_{Na}(t)$ -to- Na_{RF2} difference; D_{Na} , dialysance of sodium ion; $NaAR$, sodium concentration adjustment ratio; Na_{RF2} , $RF2$ -[Na]; Q_P , plasma flow rate; Q_{RF2} , $RF2$ flow rate; Q_{UF} , net ultrafiltration flow rate; $RF2$, sodium-adjusted-replacement fluid 2; V , volume (Watson volume); and t , time.