Patient Voice

335  Life with Sickle Cell Disease and Kidney Failure: Minimizing Fear with Knowledge
Sasha Couch
See related article on page 407.

Editorials

337  Post-Kidney Transplant Care and Health Outcomes of US Veterans
Namrata Krishnan and Susan T. Crowley
See related article on page 437.

340  Time to Procurement and Post-Kidney Transplant Outcomes: How Do We Provide a Personalized Medicine Approach to Optimizing Organ Donation?
Danielle J. Haakinson
See related article on page 427.

343  Leveraging Deep Learning to Improve Safety of Outpatient Hemodialysis
Simon Correa and Finnian R. McCausland
See related article on page 396.

345  Recurrent Hyperkalemia in Renin-Angiotensin-Aldosterone System Inhibitor (RAASI) Treatment: Stuck between a Rock and a Hard Place
Jonathan A. Bolaños and Stephen L. Seliger
See related article on page 365.

Original Articles

Acute Kidney Injury and ICU Nephrology

348  Acute Kidney Injury among Black Patients with Sickle Cell Trait and Sickle Cell Disease
Kabir O. Olaniran, Andrew S. Allegretti, Sophia H. Zhao, Sagar U. Nigwekar, and Sahir Kalim

Chronic Kidney Disease

356  Nocturnal Systolic Hypertension and Adverse Prognosis in Patients with CKD
Qin Wang, Yu Wang, Jinwei Wang, Luxia Zhang, Ming-Hui Zhao, and the Chinese Cohort Study of Chronic Kidney Disease (C-STRIDE)

Clinical Nephrology

365  Ambulatory Treatments for RAAS Inhibitor–Related Hyperkalemia and the 1-Year Risk of Recurrence
Gregory L. Hundemer, Robert Talarico, Navdeep Tangri, Silvia J. Leon, Sarah E. Bota, Emily Rhodes, Greg A. Knoll, and Manish M. Sood
See related editorial on page 345.
Cystic Kidney Disease

Patients with Protein-Truncating PKD1 Mutations and Mild ADPKD
Matthew B. Lanktree, Elsa Guiard, Pedram Akbari, Marina Pouraalkari, Ioan-Andrei Iliuta, Syed Ahmed, Amirreza Haghighi, Ning He, Xuewen Song, Andrew D. Paterson, Korosh Khalili, and York P.C. Pei

Diabetes and the Kidney

Kidney, Cardiovascular, and Safety Outcomes of Canagliflozin according to Baseline Albuminuria: A CREDECE Secondary Analysis

Maintenance Dialysis

Deep Learning Model for Real-Time Prediction of Intradialytic Hypotension
Hojun Lee, Donghwan Yun, Jayeon Yoo, Kiyoon Yoo, Yong Chul Kim, Dong Ki Kim, Kook-Hwan Oh, Kwon Wook Joo, Yon Su Kim, Nojun Kwak, and Seung Seok Han
See related editorial on page 343.

Transplantation

Mortality and Access to Kidney Transplantation in Patients with Sickle Cell Disease–Associated Kidney Failure
Sunjae Bae, Morgan Johnson, Allan B. Massie, Xun Luo, Carlton Haywood Jr., Sophie M. Lanzkron, Morgan E. Grams, Dorry L. Segev, and Tanjala S. Purnell
See related Patient Voice on page 335.

Acute Kidney Injury, Microvascular Rarefaction, and Estimated Glomerular Filtration Rate in Kidney Transplant Recipients
Alice Doreille, Féryel Azzi, Stéphanie Lariviére-Beaudoin, Annie Karakeussian-Rimbaud, Dominique Trudel, Marie-Josée Hebert, Melanie Dieudé, Natacha Patey, and Héloïse Cardinal

The Association of Time to Organ Procurement on Short- and Long-Term Outcomes in Kidney Transplantation
Verner Eerola, Ilkka Helanterä, Anna But, Marko Lempinen, Heikki Mäkisalo, Arno Nordin, Helena Isoniemi, and Ville Sallinen
See related editorial on page 340.

Source of Post-Transplant Care and Mortality among Kidney Transplant Recipients Dually Enrolled in VA and Medicare
Winn Cashion, Walid F. Gellad, Florentina E. Sileanu, Maria K. Mor, Michael J. Fine, Jennifer Hale, Daniel E. Hall, Shari Rogal, Galen Switzer, Mohan Ramkumar, Virginia Wang, Douglas A. Bronson, Mark Wilson, William Gunnar, and Steven D. Weisbord
See related editorial on page 337.

Research Letters

Preliminary Assessment of Acute Kidney Injury in Critically Ill Children Associated with SARS-CoV-2 Infection: A Multicenter Cross-Sectional Analysis
Erica C. Bjornstad, Kelli A. Krallman, David Askenazi, Michael Zappitelli, Stuart L. Goldstein, and Rajit K. Basu, on behalf of the SPARC Investigators
Research Letters (Continued)

449 Impact of COVID-19 Pandemic in Children with CKD or Immunosuppression
Antonio Mastrangelo, William Morello, Enrico Vidal, Isabella Guzzo, Luigi Annicchiarico Petruzzielli, Elisa Benetti, Marco Materassi, Mario Giordano, Andrea Pasini, Ciro Corrado, Giuseppe Puccio, Roberto Chimenz, Carmine Pecoraro, Laura Massella, Licia Peruzzi, and Giovanni Montini,
on behalf of the COVID-19 Task Force of the Italian Society of Pediatric Nephrology

452 Outcomes of Patients on Maintenance Dialysis Hospitalized with COVID-19
Lili Chan, Suraj K. Jaladanki, Sulaiman Somani, Ishan Paranjpe, Arvind Kumar, Shan Zhao, Lewis Kaufman, Staci Leisman, Shuchita Sharma, John Cijiang He, Barbara Murphy, Zahi A. Fayad, Matthew A. Levin, Erwin P. Bottinger, Alexander W. Charney, Benjamin S. Glicksberg, Steven G. Coca, and Girish N. Nadkarni,
on behalf of the Mount Sinai COVID Informatics Center (MSCIC)

Erratum

456 Correction: Infection-Related Acute Care Events among Patients with Glomerular Disease

Genomics of Kidney Disease

458 GWAS-Based Discoveries in IgA Nephropathy, Membranous Nephropathy, and Steroid-Sensitive Nephrotic Syndrome
Elena Sanchez-Rodriguez, Christopher T. Southard, and Krzysztof Kiryluk

Kidney Case Conference: How I Treat

467 Resistant Hypertension in CKD
George Thomas and Mahboob Rahman

Perspectives

470 Children with CKD Are Not Little Adults with CKD: Pediatric Considerations for the Advancing American Kidney Health Initiative
Alexander J. Kula and Michael J.G. Somers, on behalf of the American Society of Pediatric Nephrology

473 Challenges with Providing Hospice Care for Patients Undergoing Long-Term Dialysis
Jane O. Schell and Douglas S. Johnson

476 Uric Acid and CKD Progression Matures with Lessons for CKD Risk Factor Discovery
Oluwaseun Oluwo and Julia J. Scialla

Feature

479 Preprint Servers in Kidney Disease Research: A Rapid Review
Caitlyn Vlasschaert, Cameron Giles, Swapnil Hiremath, and Matthew B. Lanktree
Review

Pathophysiology and Treatment of Enteric Hyperoxaluria

Celeste Witting, Craig B. Langman, Dean Assimos, Michelle A. Baum, Annamaria Kausz, Dawn Milliner, Greg Tasian, Elaine Worcester, Meaghan Allain, Melissa West, Felix Knauf, and John C. Lieske

On the Cover

What is the diagnosis?

A 72-year-old patient with recent history of systemic lambda light-chain AL amyloidosis under chemotherapy, malabsorptive diarrhea, and normal baseline kidney function was admitted for acute kidney failure. The laboratory tests showed that serum creatinine raised from 1.13 mg/dl to 3.97 mg/dl, and proteinuria was at 0.18 g/24h with a small passage of albumin and lambda monoclonal light chains in urine and normal serum light chains.

Image Description:

With light microscopy (left image: hematoxylin staining, middle image and right image: Congo red staining and polarized light; ×300), histopathology showed birefringent crystals in several tubules (arrowheads). Amyloid deposits were observed in medium size vessels (arrows) and at the vascular pole of a glomerulus (asterisk) and in scarcity in glomerular and tubule-interstitial compartments. Tubular atrophy was associated with interstitial fibrosis (25% of total surface).

Teaching Points:

These findings suggest the importance of considering acute oxalate nephropathy in the diagnosis of nonresolving acute kidney failure induced by diarrhea even in patients with another active kidney disease. The gastrointestinal amyloid infiltrations lead to lymphatic congestion resulting in lipid-rich lymph leakage into the intestinal lumen (1) ensuring a saponification process due to calcium, thereby oxalate free for absorption in the colon. Chronic dehydration, low calcium levels, and diarrheal loss of crystallization inhibitors such as magnesium and citrate favor crystallogenesis. The prognosis is poor, and the treatment consists in a low oxalate and fatty diet and correction of ionic disorders (2). Resumption of chemotherapy is important in order to regress amyloid infiltration in the digestive tract. Glomerular deposits exist in almost 97% of cases, leading to proteinuria in the nephrotic ranges and mainly composed of light chains (3). Vascular-limited deposits lead to low-grade proteinuria and much worse kidney prognosis because the lack of proteinuria may delay the diagnosis and the treatment; therefore, kidney biopsy should be performed.

References:


(Text and images provided by Andrei-Radu Anghel, Department of Nephrology, CHU Dijon, Bourgogne, France; Georges Tarris, Department of Pathology, CHU Dijon, Bourgogne, France; Laurent Martin, Department of Pathology, CHU Dijon, Bourgogne, France and INSERM UMR 1098, Besançon, France; Denis Caillat, Department of Haematology, CHU Dijon, Bourgogne, France; Jean-Michel Rebibou, Department of Nephrology, CHU Dijon, Bourgogne, France and INSERM UMR 1098, Besançon, France; and Mathieu Legendre, Department of Nephrology, CHU Dijon, Bourgogne, France)