Patient Voice

971 12 Tips to Nephrology Teams Supporting Patients with Advanced Kidney Disease: An Advocate’s Dozen
Edward V. Hickey III
See related article on page 1022.

Editorials

973 Urinary Phosphorus Excretion: Not What We Have Believed It to Be?
Adamasco Cupisti and Maurizio Gallieni
See related article on page 1002.

975 The Changing Spectrum of Heroin-Associated Kidney Disease
Sanjeev Sethi
See related article on page 1030.

977 Evolving Epidemiology of Pediatric Glomerular Disease
Michelle N. Rheault and Scott E. Wenderfer
See related article on page 1047.

979 Site of Care and Health Outcomes of Veterans Undergoing Maintenance Dialysis
Wissam Kourany and Susan T. Crowley
See related article on page 1055.

982 The Affordable Care Act, Kidney Transplant Access, and Kidney Disease Care in the United States
Nitender Goyal and Daniel E. Weiner
See related article on page 1069.

Original Articles

Acid/Base and Electrolyte Disorders

984 Risk Factors and Outcomes of Rapid Correction of Severe Hyponatremia
Jason C. George, Waleed Zafar, Ion Dan Bucaloiu, and Alex R. Chang

Chronic Kidney Disease

993 Self-Reported Tobacco, Alcohol, and Illicit Drug Use and Progression of Chronic Kidney Disease
Joshua D. Bundy, Lydia A. Bazzano, Dawei Xie, Janet Cohan, Jacqueline Dolata, Jeffrey C. Fink, Chi-yuan Hsu, Kenneth Jamerson, James Lash, Gail Makos, Susan Steigerwalt, Xue Wang, Katherine T. Mills, Jing Chen, Jiang He, and the CRIC Study Investigators

1002 Twenty-Four-Hour Urine Phosphorus as a Biomarker of Dietary Phosphorus Intake and Absorption in CKD: A Secondary Analysis from a Controlled Diet Balance Study
Elizabeth R. Stremke, Linda D. McCabe, George P. McCabe, Berdine R. Martin, Sharon M. Moe, Connie M. Weaver, Munro Peacock, and Kathleen M. Hill Gallant
See related editorial on page 973.

1013 Soluble Urokinase-Type Plasminogen Activator Receptor in Black Americans with CKD
Shengyuan Luo, Josef Coresh, Adrienne Tin, Casey M. Rebholz, Teresa K. Chen, Salim S. Hayek, Melissa Tracy, Michael S. Lipkowitz, Lawrence J. Appel, Andrew S. Levey, Lesley A. Inker, Jochen Reiser, and Morgan Erika Grams
Geriatric and Palliative Nephrology

1022 Emotional Impact of Illness and Care on Patients with Advanced Kidney Disease
Ann M. O’Hare, Claire Richards, Jackie Szarka, Lynne V. McFarland, Whitney Showalter, Elizabeth K. Vig, Rebecca L. Sudore, Susan T. Crowley, Ranak Trivedi, and Janelle S. Taylor
See related Patient Voice on page 971.

Glomerular and Tubulointerstitial Diseases

1030 Heroin Use Is Associated with AA-Type Kidney Amyloidosis in the Pacific Northwest
Arjun Sharma, Priyanka Govindan, Mirna Toukatly, Jack Healy, Connor Henry, Steve Senter, Behzad Najaﬁan, and Bryan Kestenbaum
See related editorial on page 975.

1037 Kidney Involvement of Patients with Waldenström Macroglobulinemia and Other IgM-Producing B Cell Lymphoproliferative Disorders

1047 The Spectrum of Biopsy-Proven Glomerular Diseases among Children in China: A National, Cross-Sectional Survey
Sheng Nie, Wenjuan He, Ting Huang, Diankun Liu, Guobao Wang, Jian Geng, Nan Chen, Gang Xu, Ping Zhang, Yang Luo, Jing Nie, Xin Xu, and Fan Fan Hou
See related editorial on page 977.

Maintenance Dialysis

1055 Dialysis Provider and Outcomes among United States Veterans Who Transition to Dialysis
See related editorial on page 979.

1063 Prevalence of Central Vein Stenosis in Patients Referred for Vein Mapping
Fasika M. Tedla, Guerrier Clerger, Dale Distant, and Moro Salifu

Transplantation

1069 Association between Medicaid Expansion under the Affordable Care Act and Preemptive Listings for Kidney Transplantation
Meera N. Harhay, Ryan M. McKenna, Suzanne M. Boyle, Karthik Ranganna, Lissa Levin Mizrahi, Stephen Guy, Gregory E. Malat, Gary Xiao, David J. Reich, and Michael O. Harhay
See related editorial on page 982.

Erratum

1079 Correction

Kidney Case Conference: Attending Rounds

1080 Management of Nonadherence in ESKD Patients
Scott D. Cohen and Paul L. Kimmel

Nephropharmacology for the Clinician

1083 Introduction to Nephropharmacology for the Clinician: A New CJASN Series
Thomas D. Nolin and Mark A. Perazella
See related article on page 1085.

1085 Clinical Pharmacokinetics in Kidney Disease: Fundamental Principles
Tom N. Lea-Henry, Jane E. Carland, Sophie L. Stocker, Jacob Sevastos, and Darren M. Roberts
See related article on page 1083.
Perspectives

1096 Requirements for Procedural Skills in Nephrology Training Programs: Framing the Conversation
Suzanne M. Norby
See related articles on pages 1099, 1102 and 1105.

1099 Training Nephrology Fellows in Temporary Hemodialysis Catheter Placement and Kidney Biopsies Is Needed and Should be Required
Jeffrey S. Berns
See related articles on pages 1096, 1102 and 1105.

1102 Training Nephrology Fellows in Temporary Hemodialysis Catheters and Kidney Biopsies Is Not Needed and Should Not Be Required
Stuart J. Shankland
See related articles on pages 1096, 1099 and 1105.

1105 Kidney Biopsy Training and the Future of Nephrology: What about the Patient?
Robert S. Brown
See related articles on pages 1096, 1099 and 1102.

1107 Burden of Proof for Tolvaptan in ADPKD: Did REPRISE Provide the Answer?
Reem A. Mustafa and Alan S.L. Yu

1110 Mandating Staffing Ratios in Hemodialysis Facilities: California SB 349 and Unintended Consequences
Anjay Rastogi and Glenn M. Chertow

Feature

1113 Overcoming Translational Barriers in Acute Kidney Injury: A Report from an NIDDK Workshop

Review

1124 BP Measurement Techniques: What They Mean for Patients with Kidney Disease
George Thomas and Paul E. Drawz

On the Cover

What's the diagnosis?
A 55 year-old man, originally from Cameroon, with a history of hypertension and Stage 3 CKD attributed to diabetes mellitus, presented with malaise and fatigue. He was diagnosed with AKI with BUN 127 mg/dL and serum creatinine (sCr) 18.9 mg/dL (baseline 1.5 mg/dL). Urinalysis revealed 1 WBC/hpf, no crystals, and urine protein/creatinine ratio 0.16 g/g. Serological testing was negative, and kidney ultrasound showed increased echogenicity. Kidney biopsy revealed numerous intraluminal calcium oxalate crystals consistent with oxalate nephropathy. On further questioning, the patient reported ingesting multiple unknown herbal bowel cleansing regimens while in Africa. He was initiated on hemodialysis with eventual kidney recovery by 8 weeks. No genetic testing was pursued. Follow-up sCr was 3.49 mg/dL (eGFR 22 ml/min per 1.73m²) off dialysis.

Light microscopy revealed 20 glomeruli, of which 5 were globally sclerotic. Patent glomeruli were normocellular without mesangial expansion. Moderate acute tubular injury was present. Numerous translucent crystals were present in tubule lumens and in epithelial cell cytoplasm that were birefringent under polarized light (H&E, Figure 1; silver, Figure 2). Diffuse interstitial edema was present in association with 20 – 25% tubulointerstitial fibrosis. IF and EM were unrevealing.

Primary hyperoxaluria results from autosomal recessive mutations in AGXT, GRHPR, or HOGA1. Secondary hyperoxaluria, as in this patient, has numerous etiologies and remains an uncommonly diagnosed cause of AKI. Etiologies of acquired oxalate nephropathy include increased dietary oxalate intake, ethylene glycol toxicity, fat malabsorption, vitamin C supplementation, and B6 deficiency. In contrast, calcium phosphate crystals are blue to purple on H&E, react with von Kossa stain, and are not birefringent.

(Images and text provided by Javier Rodriguez-Sanchez, MD; Mohamad Hanouneh, MD; and C. John Sperati, MD, MHS, Johns Hopkins University, Department of Medicine, Division of Nephrology, Baltimore, Maryland)