Patient Voice

473  Knowledge Measurement Can Point to Opportunities, but Has Limits
Karol A. Franks
See related article on page 555.

Editorials

475  Symptoms with or because of Kidney Failure?
Khaled Abdel-Kader
See related article on page 496.

478  Could Phosphate Provide a Second Chance for Statin Therapy in Kidney Failure?
Orlando M. Gutiérrez
See related article on page 546.

481  Measuring Disease and Transplant Knowledge among Patients with Advanced CKD: Tools to Increase Access and Advance Equity
Megan A. Urbanski and Rachel E. Patzer
See related article on page 555.

484  Is There an Ideal Recipe to Increase Home Dialysis Use?: Is It Enough?
Jenny I. Shen and Jeffrey Perl
See related article on page 535.

Original Articles

Chronic Kidney Disease

487  Patient-Reported Symptoms and Subsequent Risk of Myocardial Infarction in Chronic Kidney Disease
Benjamin Lidgard, Leila R. Zelnick, Kevin D. O’Brien, and Nisha Bansal

496  Trajectories of Uremic Symptom Severity and Kidney Function in Patients with Chronic Kidney Disease
Kendra E. Wulczyn, Sophia H. Zhao, Eugene P. Rhee, Sahir Kalim, and Tariq Shafi
See related editorial on page 475.

Cystic Kidney Disease

507  Effects of Hydrochlorothiazide and Metformin on Aquaresis and Nephroprotection by a Vasopressin V2 Receptor Antagonist in ADPKD: A Randomized Crossover Trial

Glomerular and Tubulointerstitial Diseases

518  Chronic Kidney Disease from Polyvinylpyrrolidone Deposition in Persons with Intravenous Drug Use
Ida V. Stalund, Heidi Granseth, Finn P. Reinhold, Einar Svarstad, Hans-Peter Marti, and Sabine Leh

527  Kidney Histopathologic Spectrum and Clinical Indicators Associated with MGRS
Zi-hao Yong, Xiao-juan Yu, Jing-xia Liu, Fu-de Zhou, Su-xia Wang, and Ming-hui Zhao
Maintenance Dialysis

535 Multifaceted Intervention to Increase the Use of Home Dialysis: A Cluster Randomized Controlled Trial
Braden J. Manns, Amit X. Garg, Manish M. Sood, Thomas Ferguson, S. Joseph Kim, David Naimark, Gihad E. Nesrallah, Steven D. Soroka, Monica Beaulieu, Stephanie N. Dixon, Ahsan Alam, Selina Allu, and Navdeep Tangri
See related editorial on page 484.

546 Association of Serum Phosphate with Efficacy of Statin Therapy in Hemodialysis Patients
Ziad A. Massy, Thomas Merkling, Sandra Wagner, Nicolas Girerd, Marie Essig, Christoph Wanner, Bengt C. Fellstrom, Patrick Rossignol, and Faiez Zannad
See related editorial on page 478.

Transplantation

555 The Knowledge Assessment of Renal Transplantation (KART) 2.0: Development and Validation of CKD and Transplant Knowledge Scales
Amy D. Waterman, Devika Nair, Intan Purnajo, Kerri L. Cavanaugh, Brian S. Mittman, and John Devin Peipert
See related Patient Voice on page 473 and editorial on page 481.

Research Letter

565 Variations in Deceased Donor Terminal Creatinine Values Reported in the OPTN Data Registry
Kathleen Yu, Kristen King, Syed Ali Husain, and Sumit Mohan

Erratum

568 Correction: Prevention of Bloodstream Infections in Patients Undergoing Hemodialysis

Critical Care Nephrology and Acute Kidney Injury

570 Introduction to Critical Care Nephrology and Acute Kidney Injury
Kathleen D. Liu and Paul M. Palevsky

572 Management of Respiratory Failure: Ventilator Management 101 and Noninvasive Ventilation
Steven D. Pearson, Jay L. Koyner, and Bhakti K. Patel

Kidney Case Conference: How I Treat

581 Syndromes of Pseudo-Hyperaldosteronism
Katherine Rizzolo, Natalie M. Beck, and Sophia L. Ambruso

Kidney Case Conference: Nephrology Quiz & Questionnaire

585 Pattern Recognition versus Pathogenesis: Electrolytes in a Patient with Adrenal Insufficiency
Melanie P. Hoenig and Stewart H. Lecker

Perspectives

588 In Defense of Normal Saline: Our Perspective
Bassem Mikhael, David J.R. Steele, and Andrew Z. Fenves

591 Breaking the Barriers to Innovation in Kidney Care: The Time is Now
Allen R. Nissenson, Glenn M. Chertow, and Paul T. Conway

Features

594 Molecular Signatures of Diabetic Kidney Disease Hiding in a Patient with Hypertension-Related Kidney Disease: A Clinical Pathologic Molecular Correlation
Jiten Patel, Jose R. Torrealba, Emilio D. Poggio, Jack Bebiak, Charles E. Alpers, Stephanie M. Grewenow, Robert D. Toto, and Michael T. Eadon, for the Kidney Precision Medicine Project
A 45-year-old woman presented with generalized body ache, fatigue, and significant weight loss. On evaluation, she had anemia (hemoglobin 6 g/dl), hypoalbuminemia (2.3 g/dl), elevated erythrocyte sedimentation rate (90 mm per first hour), and increased serum creatinine (2.9 mg/dl). Bone marrow aspiration/biopsy revealed 32% plasma cells (CD138+; kappa restriction). Biochemical evaluation showed normal serum protein electrophoresis pattern, IgG-kappa monoclonality in serum immunofixation, and elevated free kappa light chain (450 mg/dl) and \( \beta_2 \) microglobulin (786 mg/l). Kidney biopsy was performed in view of renal insufficiency.

**Image Description:**
Kidney biopsy revealed widespread proximal tubulopathy changes in the form of varying sizes and shapes of fuchsinophilic crystals in the proximal tubular cytoplasm. Interstitial plasma cell infiltrates were CD138+ with monoclonal restriction (kappa positive and lambda negative). Glomerular and vascular compartment were unremarkable. Immunofluorescence studies were negative with panel (IgG, IgA, IgM, C3, C1q). Crystals were diffusely kappa light chain restricted and negative for lambda light chain per immunoperoxidase. Ultrastructure study of tubule confirmed crystalline material of variable shapes. Urinalysis for Fanconi syndrome screening did not show elevation of phosphates, potassium, or uric acid.

**Teaching Points:**
Light chain proximal tubulopathy (LCPT) and infiltration by myeloma cells is a rare phenomenon, occurring in less than 1% of plasma cell dyscrasia. Even though the early reported cases were associated with Fanconi syndrome, the absence of Fanconi syndrome does not exclude the possibility of LCPT (as illustrated by this case). LCPT can morphologically manifest with and without crystal deposition. Proximal tubulopathy with crystals is almost always associated with kappa light chains. These crystals are resistant to proteolysis and serve as a nidus for further accumulation within the lysosomes. Proximal tubulopathy without crystals is predominantly associated with lambda light chains. Our patient was treated with four cycles of a bortezomib/thalidomide/dexamethasone regimen, resulting in complete remission.

*(Text and images provided by Mahesha Vankalakunti, Pathology & Laboratory Medicine, Manipal Hospital, Bengaluru, India; Raveendra Madraki, Nephrology, Yashoda Hospital, Vijayapura, India; and Janardhan Kamath, KS Hegde Hospital, Mangalore, India.)*