Editorials

541 To Screen or Not to Screen: That Is Not (Yet) the Question
Delphine S. Tuot and Carmen A. Peralta
See related article on page 562.

544 Is Nutritional Vitamin D Supplementation Beneficial in Dialysis Patients?
Matthew J. Damasiewicz and Nigel D. Toussaint
See related article on page 611.

547 Reducing Arterial Stiffness in CKD: Revising the Paradigms
Julio A. Chirinos and Raymond R. Townsend
See related article on page 639.

551 Vascular Calcification in Predialysis CKD: Common and Deadly
Wei Chen and Michal L. Melamed
See related article on page 654.

Original Articles

Acute Kidney Injury

554 AKI in Hospitalized Children: Comparing the pRIFLE, AKIN, and KDIGO Definitions
Scott M. Sutherland, John J. Byrnes, Manish Kothari, Christopher A. Longhurst, Sanjeev Dutta, Pablo Garcia, and Stuart L. Goldstein

Chronic Kidney Disease

562 Added Value of Screening for CKD among the Elderly or Persons with Low Socioeconomic Status
Priya Vart, Sjimen A. Reijneveld, Ute Bültmann, and Ronald T. Gansevoort
See related editorial on page 541.

571 Progression of Pediatric CKD of Nonglomerular Origin in the CKiD Cohort
Sahar A. Fathallah-Shaykh, Joseph T. Flynn, Christopher B. Pierce, Alison G. Abraham, Tom D. Blydt-Hansen, Susan F. Massengill, Marva M. Moxey-Mims, Bradley A. Warady, Susan L. Furth, and Craig S. Wong

578 Metabolically Healthy Obesity and Risk of Incident CKD
Yoshitaka Hashimoto, Muhei Tanaka, Hiroshi Okada, Taka ūmi Senmaru, Masahide Hamaguchi, Mai Asano, Masahiro Yamazaki, Yohei Oda, Goji Hasegawa, Hitoshi Toda, Naoto Nakamura, and Michiaki Fukui

584 Nonesterified Fatty Acids and Cardiovascular Mortality in Elderly Men with CKD
Zibo Xiong, Hong Xu, Xiaoyan Huang, Johan Årnlöv, Abdul Rashid Qureshi, Tommy Cederholm, Per Sjögren, Bengt Lindholm, Ulf Risérus, and Juan Jesús Carrero

Clinical Nephrology

592 Spectrum of Steroid-Resistant and Congenital Nephrotic Syndrome in Children: The PodoNet Registry Cohort
Sangeeta Hingorani, Emily Pao, Gary Schoch, Ted Gooley, and George J. Schwartz

ESRD and Chronic Dialysis

611  Nutritional Vitamin D Supplementation in Dialysis: A Randomized Trial
Ishir Bhan, Dorothy Dobens, Hector Tamez, Joseph J. Deferio, Yan Chun Li, H. Shaw Warren, Elizabeth Ankers, Julia Wengor, J. Kevin Tucker, Caitlin Trotter, Fridosh Pathan, Sahir Kalim, Sagar U. Nigwekar, and Ravi Thadhani
See related editorial on page 544.

620  N-Terminal Pro–B-Type Natriuretic Peptide Variability in Stable Dialysis Patients
Magid A. Fahim, Andrew Hayen, Andrea R. Horvath, Goce Dimeski, Amanda Coburn, David W. Johnson, Carmel M. Hawley, Scott B. Campbell, and Jonathan C. Craig

Hypertension

630  Ambulatory Recording of Wave Reflections and Arterial Stiffness during Intra- and Interdialytic Periods in Patients Treated with Dialysis
Antonios Karpetas, Pantelis A. Sarafidis, Panagiotis I. Georgianos, Athanase Protogerou, Pantelis Vakianis, Georgios Koutroumpas, Vasileios Raptis, Dimitrios N. Stamatiadis, Christos Syrganas, Vassilios Liakopoulus, Georgios Efstratiadis, and Anastasios N. Lasaridis

639  Effect of Lisinopril and Atenolol on Aortic Stiffness in Patients on Hemodialysis
Panagiotis I. Georgianos and Rajiv Agarwal
See related editorial on page 547.

Mineral Metabolism/Bone Disease

646  Comparison of Fracture Risk Prediction among Individuals with Reduced and Normal Kidney Function

654  Vascular Calcification in Patients with Nondialysis CKD over 3 Years
See related editorial on page 551.

Nephrolithiasis

667  Calcium and Phosphorus Regulatory Hormones and Risk of Incident Symptomatic Kidney Stones
Eric N. Taylor, Andrew N. Hoofnagle, and Gary C. Curhan

Renal Physiology

676  Integrated Control of Na Transport along the Nephron
Lawrence G. Palmer and Jürgen Schnermann

Role of the Medical Director

688  Maintaining Safety in the Dialysis Facility
Alan S. Kliger

Attending Rounds

696  A Patient with Acute Kidney Pain and High Blood Pressure
Debbie L. Cohen and Michael C. Soulen
What’s the diagnosis? A 26-year-old man with lower extremity edema was referred to nephrology clinic for evaluation of 5.2 grams proteinuria. Past medical history was significant for multiple urinary tract infections as a child and hypertension diagnosed at age 19. Laboratory data were remarkable for a creatinine of 1.47 mg/dl, with an estimated GFR of 58 ml/min per 1.73 m². Urinalysis demonstrated 3+ protein and 3+ blood. Urine sediment revealed 5-10 monomorphic red blood cells per high power field without cellular casts. Serum complement levels were normal and tests for dsDNA, ANA, ANCA, HIV, HBV and HCV were negative. Native kidney biopsy showed focal segmental glomerular sclerosis and numerous interstitial foam cells on light microscopy (upper panel, Masson trichrome stain). Routine immunofluorescence microscopy demonstrated no staining for immunoglobulin or complement. Electron microscopy revealed podocyte foot process effacement and diffuse thickening and splitting of the lamina densa of the glomerular basement membrane (lower panel), indicative of Alport syndrome. Diagnosis was confirmed with immunofluorescence microscopy that showed absence of alpha-5 chains of type IV collagen. Alport syndrome is a basement membrane disorder arising from mutations in genes encoding type IV collagen and is often associated with sensorineural hearing loss and ocular abnormalities. The initial renal presentation is usually asymptomatic hematuria starting in childhood which progresses to proteinuria, HTN and CKD. Rare patients present with nephrotic syndrome. Light microscopy typically shows varying degrees of focal segmental and global glomerular sclerosis that can mimic FSGS. The presence of numerous interstitial foam cells is observed most often with Alport syndrome; however, foam cells also occur in patients with other causes for nephrotic syndrome, although much less often and less numerous. Characteristic glomerular basement membrane ultrastructural features with absence of immunostaining for collagen IV alpha 5 chains allows a definitive diagnosis. (Image and text provided by Fernanda Payan Schober, MD, University of North Carolina Chapel Hill, Nephrology and J. Charles Jennette, MD, University of North Carolina Chapel Hill, Pathology and Laboratory Medicine)