Editorials

831 Novel Treatments of Autosomal Dominant Polycystic Kidney Disease
Rex L. Mahnensmith
See related article on pages 881 and 889.

837 Do Socioeconomic Factors Affect Dialysis Modality Selection?
Gihad Nesrallah and Braden Manns
See related article on page 929.

840 Caregiver Burden and Hemodialysis
Lewis M. Cohen and Michael J. Germain
See related article on page 936.

843 BMI, Sex, and Access to Transplantation
Anne M. Huml and Ashwini R. Sehgal
See related article on page 951.

845 To Err Is Human: Lessons from Patient Safety Research for Transplant Care
Lipika Samal and David W. Bates
See related article on page 960.

Original Articles

Acute Kidney Injury /Acute Renal Failure

848 Validation of the Kidney Disease Improving Global Outcomes Criteria for AKI and Comparison of Three Criteria in Hospitalized Patients
Tomoko Fujii, Shigehiko Uchino, Masanori Takinami, and Rinaldo Bellomo

Chronic Kidney Disease

855 Presence and Outcomes of Kidney Disease in Patients with Pulmonary Hypertension

864 Association of Low-Protein Supplemented Diets with Fetal Growth in Pregnant Women with CKD
Giorgina B. Piccoli, Filomena Leone, Rossella Attini, Silvia Parisi, Federica Fassio, Maria Chiara Deagostini, Martina Ferraresi, Roberta Clari, Sara Ghiotto, Marilisa Biolcati, Domenica Giuffrida, Alessandro Rolfo, and Tullia Todros

874 Bisphosphonates and Mortality in Women with CKD and the Presence or Absence of Cardiovascular Disease
Robert M. Perkins, H. Lester Kirchner, Kunihiro Matsushita, Ion D. Bucaloiu, Evan Norfolk, and James E. Hartle

881 Low-Dose Rapamycin (Sirolimus) Effects in Autosomal Dominant Polycystic Kidney Disease: An Open-Label Randomized Controlled Pilot Study
William E. Braun, Jesse D. Schold, Brian R. Stephany, Rita A. Spirko, and Brian R. Herts
See related editorial on page 831.
Clinical Nephrology

889 Effect of Pravastatin on Total Kidney Volume, Left Ventricular Mass Index, and Microalbuminuria in Pediatric Autosomal Dominant Polycystic Kidney Disease
Melissa A. Cadnapaphornchai, Diana M. George, Kim McFann, Wei Wang, Berenice Gitomer, John D. Strain, and Robert W. Schrier
See related editorial on page 831.

897 Association of C4d Deposition with Clinical Outcomes in IgA Nephropathy
Mario Espinosa, Rosa Ortega, Marina Sánchez, Álfonso Segarra, Maria Teresa Salcedo, Fayna González, Rafael Camacho, Miguel Ángel Valdivia, Rocio Cabrera, Katia López, Fernando Pinedo, Eduardo Gutierrez, Álfonso Valera, Miryam Leon, María Angeles Cobo, Rosa Rodríguez, Jose Ballarín, Yolanda Arce, Beatriz García, María Dolores Muñoz, and Manuel Praga for the Spanish Group for the Study of Glomerular Diseases (GLOSEN)

905 Predictors of Treatment Outcomes in ANCA-Associated Vasculitis with Severe Kidney Failure

Epidemiology and Outcomes

914 The Effect of Lowering LDL Cholesterol on Vascular Access Patency: Post Hoc Analysis of the Study of Heart and Renal Protection

920 Associations between Depressive Symptoms and Incident ESRD in a Diabetic Cohort
Margaret K. Yu, Noel S. Weiss, Xiaobo Ding, Wayne J. Katon, Xiao-Hua Zhou, and Bessie A. Young

ESRD and Chronic Dialysis

929 Socioeconomic Differences in the Uptake of Home Dialysis
Blair S. Grace, Philip A. Clayton, Nicholas A. Gray, and Stephen P. McDonald
See related editorial on page 837.

936 Effects of Frequent Hemodialysis on Perceived Caregiver Burden in the Frequent Hemodialysis Network Trials
Rita S. Suri, Brett Larive, Yoshio Hall, Paul L. Kimmel, Alan S. Kliger, Nathan Levin, Manjula Kurella Tamura, Glenn M. Chertow, and the Frequent Hemodialysis Network (FHN) Trial Group
See related editorial on page 840.

Nephrolithiasis

943 Heritability of Urinary Traits That Contribute to Nephrolithiasis
John C. Lieske, Stephen T. Turner, Samuel N. Edeh, Jennifer A. Smith, and Sharon L.R. Kardia

Renal Transplantation

951 Differential Association of Body Mass Index with Access to Kidney Transplantation in Men and Women
John S. Gill, Elizabeth Hendren, Jianghu Dong, Olwyn Johnston, and Jagbir Gill
See related editorial on page 843.

960 Clinical and Economic Outcomes Associated with Medication Errors in Kidney Transplantation
See related editorial on page 845.

Commentary

967 What Can We Learn from the Saga of Chitosan Gums in Hyperphosphatemia Therapy?
Man S. Oh and Jaime Uribarri
On the Cover

What’s the diagnosis? A 51-year-old woman with a longstanding history of alcohol abuse and end stage liver disease presented with increased abdominal girth and pain as well as lower extremity swelling. She was taking 1-2 ibuprofen tablets (200 mg) per day for the past 10 days to 2 weeks for low back pain. Vitals signs revealed: BP- 86/44mmHg, P- 80/min, RR- 24/min, and T- 100 degrees F. Exam was notable for a distended abdomen with rebound tenderness and 2+ pitting edema to knees. Labs revealed: AST 30 IU/L, ALT 48 IU/L, alkaline phosphatase 245 IU/L, and total bilirubin 29 mg/dl. Serum creatinine was 3.1 mg/dl. Urine sodium was 16 mEq/L. Urine microscopy revealed free bilirubin crystals (upper left panel) and bilirubin crystals within a renal tubular epithelial cell (upper right panel) as well as numerous bile stained renal tubular epithelial cell (RTEC) casts (lower panel). The patient had spontaneous bacterial peritonitis with E coli, which was successfully treated with intravenous ceftriaxone and albumin. Acute kidney injury (AKI) was thought due to acute tubular injury in the setting of SBP and ibuprofen use. The patient’s kidney function began to improve on day 8 of hospitalization and kidney function returned to baseline (serum creatinine 0.8 mg/dl). The finding of bilirubin crystals within the urine is simply a reflection of hyperbilirubinemia. They are needle-like crystals that can be seen alone or more often clumped together as seen in the upper left panel. Sometimes, these crystals are engulfed by renal tubular epithelial cells or macrophages (upper right panel). The finding of numerous bile-stained RTEC casts within the urine of a cirrhotic with AKI reflects tubular injury and strongly suggests acute tubular injury (rather than prerenal AKI or hepatorenal syndrome). However, this is not a perfect test as small numbers of RTEC casts and granular casts can be seen in patients with hepatorenal syndrome (HRS). In this case, the combination of numerous RTEC casts, relatively high urine sodium, and the clinical AKI course are consistent with acute tubular injury/necrosis rather than prerenal AKI or HRS. Image and text provided by Jose Antonio Tesser Poloni, Irmandade da Santa Casa de Misericordia de Porto Alegre, Porto Alegre, Brazil, and Mark A. Perazella, Yale University School of Medicine