

# CJASN

Clinical Journal of the American Society of Nephrology

September 2017 • Vol. 12 • No. 9

## Editorials

---

**1375 The Times, They Are A-Changin: Innovations in Health Care Delivery To Reduce CKD Progression**

*Khaled Abdel-Kader*

*See related article on page 1418.*

**1377 What Is the Role of Vitamin D Supplementation on Vascular Health in CKD?**

*Nigel D. Toussaint and Irene Ruderman*

*See related articles on pages 1438 and 1447.*

**1380 Refining Diagnostic Approaches in Nephrolithiasis: Incomplete Distal Renal Tubular Acidosis**

*David S. Goldfarb*

*See related article on page 1507.*

**1383 Moving from Intuition to Data: Building the Evidence to Support and Increase Living Donor Kidney Transplantation**

*Krista L. Lentine and Didier Mandelbrot*

*See related article on page 1518.*

## Original Articles

---

### Chronic Kidney Disease

**1386 eGFR and Albuminuria in Relation to Risk of Incident Atrial Fibrillation: A Meta-Analysis of the Jackson Heart Study, the Multi-Ethnic Study of Atherosclerosis, and the Cardiovascular Health Study**

*Nisha Bansal, Leila R. Zelnick, Alvaro Alonso, Emelia J. Benjamin, Ian H. de Boer, Rajat Deo, Ronit Katz, Bryan Kestenbaum, Jehu Mathew, Cassianne Robinson-Cohen, Mark J. Sarnak, Michael G. Shlipak, Nona Sotoodehnia, Bessie Young, and Susan R. Heckbert*

**1399 eGFR and the Risk of Community-Acquired Infections**

*Hong Xu, Alessandro Gasparini, Junichi Ishigami, Khaled Mzayen, Guobin Su, Peter Barany, Johan Ärnlöv, Bengt Lindholm, Carl Gustaf Elinder, Kunihiro Matsushita, and Juan Jesús Carrero*

**1409 Association of QT-Prolonging Medication Use in CKD with Electrocardiographic Manifestations**

*Soren Snitker, Rebecca M. Doerfler, Elsayed Z. Soliman, Rajat Deo, Wendy L. St. Peter, Susan Kramlik, Michael J. Fischer, Sankar Navaneethan, Patrice Delafontaine, Bernard G. Jaar, Akinlolu Ojo, Gail K. Makos, Anne Slaven, Matthew R. Weir, Min Zhan and Jeffrey C. Fink for CRIC Study Investigators*

**1418 Pragmatic Randomized, Controlled Trial of Patient Navigators and Enhanced Personal Health Records in CKD**

*Sankar D. Navaneethan, Stacey E. Jolly, Jesse D. Schold, Susana Arrigain, Georges Nakhoul, Victoria Konig, Jennifer Hyland, Yvette K. Burrucker, Priscilla Davis Dann, Barbara H. Tucky, John Sharp, and Joseph V. Nally*  
*See related editorial on page 1375.*

**1428 Pre-ESRD Depression and Post-ESRD Mortality in Patients with Advanced CKD Transitioning to Dialysis**

*Miklos Z. Molnar, Elani Streja, Keiichi Sumida, Melissa Soohoo, Vanessa A. Ravel, Abduzhappar Gaipov, Praveen K. Potukuchi, Fridtjof Thomas, Connie M. Rhee, Jun Ling Lu, Kamyar Kalantar-Zadeh, and Csaba P. Kovacs*

**1438 Cholecalciferol, Calcitriol, and Vascular Function in CKD: A Randomized, Double-Blind Trial**

*Jessica Kendrick, Emily Andrews, Zhiying You, Kerrie Moreau, Kristen L. Nowak, Heather Farmer-Bailey, Douglas R. Seals, and Michel Chonchol*  
*See related editorial on page 1377.*

### Chronic Kidney Disease (Continued)

#### 1447 **Randomized Controlled Trial for the Effect of Vitamin D Supplementation on Vascular Stiffness in CKD**

Adeera Levin, Mila Tang, Taylor Perry, Nadia Zalunardo, Monica Beaulieu, Joshua A. Dubland, Kelly Zerr, and Ognjenka Djurdjev  
See related editorial on page 1377.

### Cystic Kidney Disease

#### 1461 **Fibroblast Growth Factor 23 and Kidney Disease Progression in Autosomal Dominant Polycystic Kidney Disease**

Michel Chonchol, Berenice Gitomer, Tamara Isakova, Xuan Cai, Isidro Salusky, Renata Pereira, Kaleab Abebe, Vicente Torres, Theodor I. Steinman, Jared J. Grantham, Arlene B. Chapman, Robert W. Schrier, and Myles Wolf

### Genetics

#### 1470 **Long-Term Dose-Dependent Agalsidase Effects on Kidney Histology in Fabry Disease**

Rannveig Skrunes, Camilla Tøndel, Sabine Leh, Kristin Kampevold Larsen, Gunnar Houge, Einar Skulstad Davidsen, Carla Hollak, André B.P. van Kuilenburg, Frédéric M. Vaz, and Einar Svarstad

### Geriatric Nephrology

#### 1480 **Frailty Screening Tools for Elderly Patients Incident to Dialysis**

Ismay N. van Loon, Namiko A. Goto, Franciscus T.J. Boereboom, Michiel L. Bots, Marianne C. Verhaar, and Marije E. Hamaker

### Maintenance Dialysis

#### 1489 **Initiation of Sevelamer and Mortality among Hemodialysis Patients Treated with Calcium-Based Phosphate Binders**

Hirota Komaba, Mia Wang, Masatomo Taniguchi, Suguru Yamamoto, Takano Nomura, Douglas E. Schaubel, Abigail R. Smith, Jarcy Zee, Angelo Karaboyas, Brian Bieber, Masafumi Fukagawa, and Francesca Tentori

### Mineral Metabolism

#### 1498 **Effects of Vitamin D<sub>2</sub> Supplementation on Vitamin D<sub>3</sub> Metabolism in Health and CKD**

Zona Batacchi, Cassianne Robinson-Cohen, Andrew N. Hoofnagle, Tamara Isakova, Bryan Kestenbaum, Kevin J. Martin, Myles S. Wolf, and Ian H. de Boer

### Nephrolithiasis

#### 1507 **Furosemide/Fludrocortisone Test and Clinical Parameters to Diagnose Incomplete Distal Renal Tubular Acidosis in Kidney Stone Formers**

Nasser A. Dhayat, Michael W. Gradwell, Ganesh Pathare, Manuel Anderegg, Lisa Schneider, David Luethi, Cedric Mattmann, Orson W. Moe, Bruno Vogt, and Daniel G. Fuster  
See related editorial on page 1380.

### Transplantation

#### 1518 **A Scoping Review for Strategies to Increase Living Kidney Donation**

Lianne Barnieh, David Collister, Braden Manns, Ngan N. Lam, Soroush Shojai, Diane Lorenzetti, John S. Gill, and Scott Klarenbach  
See related editorial on page 1383.

---

## Erratum

#### 1528 **Correction**

---

## Glomerular Diseases: Update for the Clinician

#### 1529 **Viral-Associated GN: Hepatitis B and Other Viral Infections**

Warren L. Kupin

## Kidney Case Conferences

---

### Nephrology Quiz and Questionnaire

#### 1534 A Pregnant Woman with Lupus and Nephrotic-Range Proteinuria

*Andrew S. Bomback*

### How I Treat

#### 1538 Managing Issues in Dialysis for the Patient with AKI

*Eric Judd and Ashita Tolwani*

## Perspectives

---

#### 1543 Perspectives on Funding Initiatives in Clinical Research in Kidney Disease in the United States

*Rajnish Mehrotra*

#### 1544 Complementary Initiatives from the NIDDK to Advance Kidney Health

*Jenna M. Norton, Christian J. Ketchum, Andrew S. Narva, Robert A. Star, and Griffin P. Rodgers*

#### 1548 Sparking Innovation To Improve the Lives of People with Kidney Disease

*Susan T. Crowley and Laurence Meyer*

## Review

---

#### 1551 Biomarkers for Diagnosis and Prognosis of AKI in Children: One Size Does Not Fit All

*Jason H. Greenberg and Chirag R. Parikh*

### On the Cover

*What's the diagnosis?*

#### Case Discussion

45-year-old female with history of chronic kidney disease since her 20 years, on peritoneal dialysis since her 38 years, presents with a tumefaction on the right hip. She had low compliance to technique and severe non controlled hyperparathyroidism (PTH > 1000 pg/ml) with refractory hypercalcemia (total serum calcium > 11 mg/dl) and hyperphosphatemia (serum phosphorus > 6.5 mg/dl) since her 40 years. She always refused parathyroidectomy and hemodialysis. A local computed tomographic scan (CT) showed multiple calcified masses in pelvic region connected to both iliac and ischio-pubic bones, the largest adjacent to right iliac bone (images A and B). Bone scintigraphy showed radiocontrast fixation in those areas. Although a biopsy was not performed, these masses were interpreted as brown tumors. After 4 months, she developed ischemic lesions in the lower limbs secondary to severe peripheral artery disease. After 6 months, a bilateral amputation above the knees was performed. She was transferred for hemodialysis but died after a month for reasons not clarified.

#### Description of the submitted images

A contrast CT scan of the abdomen and pelvis was obtained by multislice helical technique. The following images were obtained by volume rendering 3-D reconstruction of the pelvic region.

**Image A:** Volume 3-D reconstruction of the pelvic region - Anterior View

**Image B:** Volume 3-D reconstruction of the pelvic region - Posterior view

Description: Exuberant calcified masses connected with the right ilium's wing and crest, left ischio-pubic bone and left greater trochanter. The largest mass is adjacent to right iliac bone. These masses were interpreted in context of renal osteodystrophy as brown tumors. Also there are multiple areas of bone reabsorption scattered across the pelvic bones, being more pronounced in the iliac bones and pubic symphysis. Extensive calcifications are present in the abdominal aorta and iliac vessels.

#### Teaching Points

Brown tumors are osteolytic lesions produced in context of high bone turnover induced by elevated parathormone levels. They traduce prolonged and severe disease and are rarely seen nowadays since the introduction of calcimimetics and vitamin D analogues. The early diagnosis and appropriate treatment are essential to prevent serious complications and to improve prognosis.

*(Images provided by Carolina Belino, Clara Santos and Joao Carlos Fernandes, Vila Nova de Gaia, Porto, Portugal)*