Patient Voice

585  Kidney Health Initiative Roadmap for Kidney Replacement Therapy: A Patient’s Perspective
Patrick O. Gee

587  What It Means to Live with Focal Segmental Glomerulosclerosis
Kent Bressler
See related editorial and article on pages 594 and 673, respectively.

Editorials

589  Circulating Uromodulin and Risk of Cardiovascular Events and Kidney Failure
Belen Ponte and Olivier Devuyst
See related article on page 616.

592  Benefits of Continuing RAAS Inhibitors in Advanced CKD
Marie-Michèle Gaudreault-Tremblay and Bethany J. Foster
See related article on page 625.

594  Ask and It Shall Be Given: Patient-Centered Outcomes in Glomerular Diseases
Pietro A. Canetta and Andrew S. Bomback
See related Patient Voice and article on pages 587 and 673, respectively.

597  The Elusive Promise of Bioimpedance in Fluid Management of Patients Undergoing Dialysis
Simon J. Davies
See related article on page 685.

Original Articles

Acid/Base and Electrolyte Disorders

600  Trajectories of Serum Sodium on In-Hospital and 1-Year Survival among Hospitalized Patients
Api Chewcharat, Charat Thongprayoon, Wisit Cheungpasitporn, Michael A. Mao, Sorkko Thirunavukkarasu, and Kianoush B. Kashani

Chronic Kidney Disease

608  Darbepoetin Alfa in Patients with Advanced CKD without Diabetes: Randomized, Controlled Trial
Terumasa Hayashi, Shoichi Maruyama, Masaomi Nangaku, Ichiei Narita, Hideki Hirakata, Kenichiro Tanabe, Satoshi Morita, Yoshiharu Tsubaki-Hara, Enyu Imai, and Tadao Akizawa, for the PREDICT Investigators

616  Association of Serum Uromodulin with Death, Cardiovascular Events, and Kidney Failure in CKD
Dominik Steubl, Markus P. Schneider, Heike Meiselbach, Jennifer Nadal, Matthias C. Schmid, Turgay Saritas, Vera Krane, Claudia Sommerer, Seema Baid-Agrawal, Jakob Voelkl, Fruzsina Kotsis, Anna Köttgen, Kai-Uwe Eckardt, Jürgen E. Scherberich, and GCKD Study Investigators
See related editorial on page 589.
Chronic Kidney Disease (Continued)

625 **Discontinuation of RAAS Inhibition in Children with Advanced CKD**
Sophie M. van den Belt, Hiddo J.L. Heerspink, Marietta Kirchner, Valentina Gracchi, Daniela Thurn-Valsassina, Aysun K. Bayazit, Anna Niemirska, Nur Canpolat, Ipek Kaplan Bulut, Karolis Azukaitis, Ali Duzova, Justine Bacchetta, Rukshana Shroff, Dusan Paripovic, Zeynep Birsin Özçakar, Kibriya Fidan, Hakan Erdogan, Jutta Gellermann, Elke Wühl, Dick de Zeeuw, Anette Melk, Uwe Querfeld, and Franz Schaefer
See related editorial on page 592.

633 **A Pharmacologic “Stress Test” for Assessing Select Antioxidant Defenses in Patients with CKD**
Richard A. Zager, Ali C.M. Johnson, Alvaro Guillem, Jeff Keyser, and Bhupinder Singh

Cystic Kidney Disease

643 **A Post Hoc Analysis of Statin Use in Tolvaptan Autosomal Dominant Polycystic Kidney Disease Pivotal Trials**
Susan E. Shoaf, John Ouyang, Olga Sergeyeva, Alvin Estilo, Hui Li, and Deborah Leung

Genetics

651 **Pilot Study of Return of Genetic Results to Patients in Adult Nephrology**

Geriatric and Palliative Nephrology

665 **Walking while Talking in Older Adults with Chronic Kidney Disease**
Jim Q. Ho, Joe Verghese, and Matthew K. Abramowitz

Glomerular and Tubulointerstitial Diseases

673 **Identifying Outcomes Important to Patients with Glomerular Disease and Their Caregivers**
See related Patient Voice and editorial on pages 587 and 594, respectively.

Maintenance Dialysis

685 **Bioimpedance Guided Fluid Management in Peritoneal Dialysis: A Randomized Controlled Trial**
Na Tian, Xiao Yang, Quining Guo, Qian Zhou, Chunyan Yi, Jianxiong Lin, Peiyi Cao, Hongjian Ye, Menghua Chen, and Xueqing Yu
See related editorial on page 597.

Genomics of Kidney Disease

695 **Systems Biology and Kidney Disease**
Jennifer A. Schaub, Habib Hamidi, Lalita Subramanian, and Matthias Kretzler

Kidney Case Conference: How I Treat

704 **Providing Continuous Renal Replacement Therapy in Patients on Extracorporeal Membrane Oxygenation**
Nithin Karakala and Luis A. Juncos
Perspectives

707 Mitigating Risk of COVID-19 in Dialysis Facilities
Alan S. Kliger and Jeffrey Silberzweig

710 On the Frontline of the COVID-19 Outbreak: Keeping Patients on Long-Term Dialysis Safe
Suzanne Watnick and Elizabeth McNamara

714 Sound Science before Quick Judgement Regarding RAS Blockade in COVID-19
Matthew A. Sparks, Andrew South, Paul Welling, J. Matt Luther, Jordana Cohen, James Brian Byrd, Louise M. Burrell, Daniel Batlle, Laurie Tomlinson, Vivek Bhalla, Michelle N. Rheault, María José Soler, Sundar Swaminathan, and Swapnil Hiremath

717 Lessons from the Experience in Wuhan to Reduce Risk of COVID-19 Infection in Patients Undergoing Long-Term Hemodialysis
Junhua Li and Gang Xu

720 COVID-19 and the Inpatient Dialysis Unit: Managing Resources during Contingency Planning Pre-Crisis
Anna Burgner, T. Alp Ikizler, and Jamie P. Dwyer

Reviews

723 A Primer on Congenital Anomalies of the Kidneys and Urinary Tracts (CAKUT)
Vasikar Murugapoopathy and Indra R. Gupta

732 Metabolic Disorders with Kidney Transplant
Elizabeth Cohen, Maria Korah, Glenda Callender, Renata Belfort de Aguiar, and Danielle Haakinson

On the Cover

What is the diagnosis?
Case Description
A 44-year-old male with kidney failure on peritoneal dialysis and multiple comorbidities, including severe peripheral vascular disease, heart failure with reduced ejection fraction, superior vena cava syndrome from bilateral subclavian thrombosis, and chronic sternal osteomyelitis secondary to a prior episode of staph epidermidis endocarditis, was admitted for chest pain and hyperkalemia. He had significant history of extremely poor adherence with peritoneal dialysis and oral phosphate binders. He was on suppressive antibiotics for his chronic sternal osteomyelitis. On presentation, he was afebrile and hemodynamically stable. Physical exam revealed a tender, firm, immobile nodule at the mid-sternum and multiple hard nodules on his hands and fingers. He had mild erythema and tenderness at the incision site of a prior below-the-knee amputation. His serum potassium was 6.3 mmol/L, phosphorus was 13.5 mg/dl, calcium was 7.2 mg/dl, and parathyroid hormone was 995 pg/ml. Electrocardiogram did not reveal peaked T-waves or signs of ischemia. After the patient’s electrolyte disarray was corrected, imaging was performed for further evaluation.

Image Description
Left: CT scan of the chest revealed a lobulated, calcific mass (10.4 × 9.7 × 11.3 cm) arising from his previous sternotomy site. The cystic lesions contained multiple fluid-calcium levels, completely replacing the superior half of the sternum and encasing the previous sternotomy wires.
Center: Imaging of his hands revealed extensive soft tissue calcifications throughout the hand and fingers. There were also postsurgical changes from a prior amputation of the third metacarpal.
Right: Right knee plain film showed several lobulated, dense calcifications near the tibial and fibular stumps with extensive vascular calcifications. The findings were consistent with severe vascular calcification and tumoral calcinosis.

Teaching Points
Tumoral calcinosis is characterized by calcium deposition in periarticular soft tissue. It typically manifests as subcutaneous masses around major joints such as the hips, shoulders, and knees, with case reports of it occurring in the axial skeleton. The underlying pathophysiology can be divided into primary or secondary in etiology. Primary tumoral calcinosis occurs as a result of genetic mutations, which lead to pathologic calcification processes. There is a normophosphatemic entity and a hyperphosphatemic entity, each associated with its own mutation and a familial pattern. Secondary tumoral calcinosis is most commonly associated with kidney failure, as highlighted in this case. The pathophysiology is related to longstanding hyperphosphatemia from secondary or tertiary hyperparathyroidism. Tumoral calcinosis is difficult to treat, regardless of the etiology. The best success comes from aggressive control of serum phosphorus levels and kidney transplantation in those with kidney failure. Although surgical excision is an option, deposits can recur, and patients often have comorbidities that make them poor surgical candidates.

(Images provided by Kirsten Lee Koons, University of Virginia, Internal Medicine, Charlottesville, Virginia)