CJASN
Clinical Journal of the American Society of Nephrology

June 2015 • Vol. 10 • No. 6

Editorials

Original Articles

Acute Kidney Injury

Chronic Kidney Disease

Epidemiology and Outcomes

Original Articles (Continued)

ESRD and Chronic Dialysis

Genetics

Mineral Metabolism/Bone Disease

Renal Transplantation

Renal Physiology

Role of the Medical Director

Attending Rounds

Controversies in Nephrology

Special Feature

eJournal club provides a timely and interactive electronic journal club experience by offering a forum in which CJASN readers have the opportunity to converse with the featured study authors. Visit ejc.cjasn.org to learn more.

On the Cover

What's the diagnosis? Atheroembolic renal disease (AERD) also known as cholesterol embolization syndrome, cholesterol crystal embolization or atheroembolism occurs due to destabilization of atherosclerotic plaques. Cholesterol crystals and other contents of an atherosclerotic plaque embolize from a large artery, travel through the circulation and lodge in small arteries, causing ischemic end-organ damage. This may occur spontaneously or may follow angiography, anticoagulation, thrombolysis or coronary artery bypass grafting. Erosion of atheromatous plaque is most likely to occur in the abdominal aorta. Kidneys become a major target in cholesterol crystal embolization since the renal arteries have their origin from abdominal aorta and large fraction of the cardiac output flows through the kidneys. Renal arteries, arterioles or glomerular capillaries may get occluded by atheroemboli. The clinical manifestations are extremely variable and AERD is often termed as 'the great masquerader'. The disease may present as sudden onset of acute renal failure or as slowly declining renal function over a period of several months. Renal biopsy confirms the diagnosis of AERD. This biopsy image shows an interlobar artery completely occluded by cholesterol crystals surrounded by multinucleated giant cells and fibrous tissue. The cholesterol crystals appear as biconvex, needle-shaped 'empty' clefts as the crystals are dissolved during routine histologic preparation. There is no specific therapy and treatment consists of supportive care and general management of atherosclerosis. (*Image and text provided by Anila Kurien, Center for Renal and Urological Pathology, Chennai, India and Krishnaswamy Sampathkumar, Meenakshi Mission Hospital, Nephrology, Tamil Nadu, India*)