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【 PICTURES IN CLINICAL MEDICINE 】

Spontaneous Cholesterol Crystal Embolism and Aortic Plaques

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Key words: kidney dysfunction, cholesterol crystal embolism, kidney biopsy, magnetic resonance angiography, atherosclerotic plaque lesion

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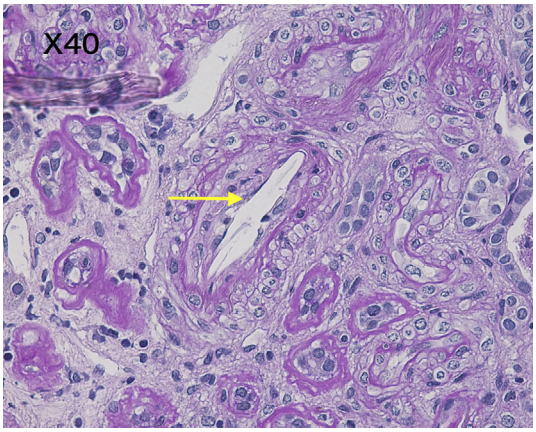
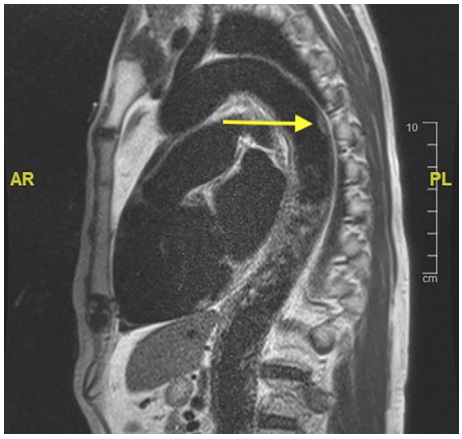
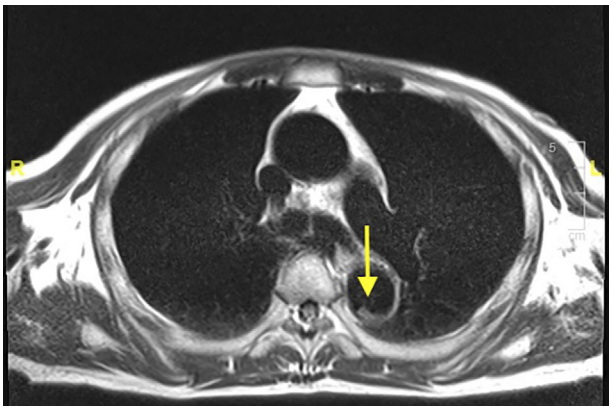


Picture 1.



Picture 2.



Picture 3.

A 72 year-old-man with diabetes mellitus, hypertension, and dyslipidemia was admitted to our hospital because his serum creatinine concentration deteriorated from 1.09 to 3.20 mg/dL over 10 months. Neither blue-colored toes nor livedo reticularis were observed, and laboratory tests did not show eosinophilia. He had never undergone endovascular intervention. A kidney biopsy revealed tubulointerstitial injury, advanced glomerulosclerosis, and moderate arterio-arteriolosclerosis with cholesterol emboli in the interlobular arteries (Picture 1). Thus, cholesterol crystal embolism (CCE) was diagnosed. Magnetic resonance angiography (MRA) demonstrated high-intensity irregularly shaped atherosclerotic plaque lesions in the descending aorta (Picture 2, 3). These plaques demonstrated a high-intensity signal on fat-suppressed T2-weighted MR imaging, which suggested their vulnerability (1). Therefore, the plaques were considered to be the source of CCE. A diagnosis of CCE is often difficult to make based on clinical features. In a study of 18 biopsy-proven renal CCE cases, CCE was initially suspected in only 3 cases (2). In our present patient, the kidney biopsy was a clue for the diagnosis. MRA can be useful for determining the source of CCE in patients at high risk of contrast-induced nephropathy.

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References

1. Corti R, Fuster V. Imaging of atherosclerosis: magnetic resonance imaging. Eur Heart J **32**: 1709-1719b, 2011.
2. Haas M, Spargo BH, Wit EJ, Meehan SM. Etiologies and outcome of acute renal insufficiency in older adults: a renal biopsy study of 259 cases. Am J Kidney Dis **35**: 433-447, 2000.