Coexistent Renal Milk of Calcium and Amyloidosis

An 81-year-old woman under medical control for hypertension had urgency incontinence and repeated urinary tract infections with intermittent white-colored urine. A calcified lesion in the left kidney was accidentally found on plain kidney, ureter, and bladder radiography during the initial investigations. Noncontrast computed tomography showed hyperdense material in dilated left renal calyces with parenchymal thinning and infundibular strictures. Left nephrectomy was performed since the image illustrated either huge nephrolithiasis or tuberculosis autonephrectomy with sacs of caseous necrotic material. The surgical specimen revealed a large amount of chalky pasty substance with fine carbonate-apatite dust filling the whole renal collecting system. Pathology examination revealed pyelonephritis with cortical tubular atrophy and amyloid deposits, which was demonstrated by Congo red stain under light and polarization microscopy. Granulomatous inflammation was not identified. Acid-fast stain and culture for mycobacteria were negative. Postsurgical period was uneventful and free from any lower urinary tract symptom. A densely calcified lesion located in the kidney is generally considered as nephrolithiasis. However, in areas where tuberculosis is endemic, renal tuberculosis may be discovered with similar image. Renal milk of calcium, usually precipitated by urinary obstruction, infection, or poorly functioning kidney, was confirmed in histopathological examination. In addition, local amyloidosis could result from chronic infection, but is an uncommon finding in chronic or severe pyelonephritis. This interesting clinical image can remind us the aforementioned underlying conditions, and we believed surgical intervention was a feasible treatment.

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