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Anti-glomerular basement membrane disease with renal amyloidosis

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Case Study : Anti-glomerular basement membrane (GBM) disease is a rare autoimmune disorder causing rapidly progressive glomerulonephritis (RPGN), whereas renal amyloidosis results from abnormal amyloid deposition, leading to chronic kidney dysfunction. The coexistence of these two distinct pathologies is extremely rare. Diagnosing and managing these conditions concurrently is particularly challenging due to overlapping clinical manifestations and differing treatments. We report a rare case of concurrent anti-GBM disease and renal amyloidosis. A 76-year-old woman with hypertension, angina pectoris, and diabetes mellitus was referred for general weakness and acute kidney function decline. She had been taking multiple medications, including angiotensin II receptor blocker, thiazide, statin/ezetimibe, calcium channel blocker, and metformin. For the past nine months, she had been taking furosemide, spironolactone, and a sodium-glucose cotransporter-2 inhibitor due to pretibial pitting edema and heart failure. Suspecting drug-induced acute kidney injury, her medications were discontinued, but renal function worsened over a month. As RPGN was suspected, she was admitted to the hospital for further evaluation. On admission, her blood urea nitrogen and serum creatinine levels worsened from 38.6/2.92 mg/dL to 63.5/4.05 mg/dL. Her anti-GBM antibody test was positive (titer: 28.0 U/mL). Other serologic markers of glomerular disease were unremarkable, and electrophoresis ruled out monoclonal gammopathy. Anti-GBM disease was suspected based on her positive anti-GBM antibody result and worsening kidney function, and steroid therapy was initiated after the kidney biopsy. Two weeks later, the biopsy confirmed renal amyloidosis with several crescentic glomeruli, revealing the rare coexistence of both diseases. Despite a decrease in the anti-GBM antibody titer from 28.0 U/mL to 7.0 U/mL, her kidney function deteriorated, leading to maintenance hemodialysis two month later. This case underscores the need for comprehensive evaluation in atypical kidney injury. While amyloidosis is typically slow-progressing, concurrent Anti-GBM disease can cause rapid renal decline, complicating diagnosis and management. Individualized treatment strategies are essential.