

Congress Abstract

Kidneys as the Initial Manifestation of Systemic Autoimmune Diseases: Diagnosis of ANCA-Associated Vasculitis and SLE in Patients Initiating Hemodialysis

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Proceedings of Central Asian Congress of Nephrologists with International Participation, October 9-10, Aktau, Kazakhstan

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ABSTRACT

Background: Renal involvement may be the first and only manifestation of systemic autoimmune disease, including ANCA-associated vasculitis (AAV) and systemic lupus erythematosus (SLE). In some cases the diagnosis is established only at stage 5 chronic kidney disease (CKD), once renal replacement therapy (RRT) becomes unavoidable, substantially worsening prognosis. Early recognition of autoimmune etiology is particularly important in patients urgently starting maintenance hemodialysis, since timely immunosuppressive therapy may, in selected cases, restore renal function and allow RRT discontinuation. This study aimed to characterize detection of autoimmune etiology of renal injury among patients with newly diagnosed stage 5 CKD urgently initiating maintenance hemodialysis.

Methods: We conducted a retrospective observational study of patients admitted to BBNURA LLP (Astana, Kazakhstan) with newly diagnosed stage 5 CKD requiring urgent hemodialysis initiation. Urgent admissions accounted for 98 of 330 patients in 2023, 89 of 363 in 2024, 70 of 424 in 2025, and 85 from January through September 2026 (342 total). From this cohort, 70 patients with clinical evidence of multisystem involvement (≥ 2 extrarenal systems affected, or unexplained systemic symptoms at admission) were selected for diagnostic work-up, assessing the ENT organs, lungs, skin, nervous system, eyes, gastrointestinal tract, musculoskeletal system, and cardiovascular system. Immunological markers (ANCA, anti-dsDNA antibodies, complement components) were evaluated, and diagnoses were confirmed using clinical, laboratory, and, where indicated, histopathological data.

Results: Systemic autoimmune markers were identified in 17 of 342 patients (5.0%) overall, and in 17 of 70 (24.3%) among those selected for screening (10 women, 7 men). AAV was diagnosed in 11 patients, confirmed by renal biopsy in 2 cases. SLE with renal, cutaneous, articular, and vascular involvement was diagnosed in 6 patients. Within the first 3 months, 3 patients died from complications of autoimmune disease, and 14 remained on maintenance hemodialysis. One patient with biopsy-confirmed AAV achieved complete remission, with recovery of kidney function and discontinuation of hemodialysis, following immunosuppressive therapy.

Conclusion: Autoimmune etiology of renal injury is clinically significant among patients with newly diagnosed stage 5 CKD urgently initiating hemodialysis, and targeted clinical screening substantially increased detection yield (5.0% overall vs. 24.3% among selected patients), predominantly identifying AAV and SLE. These findings support active screening for systemic autoimmune disease in newly diagnosed end-stage renal disease and warrant prospective, unselected screening to determine true population prevalence. Timely diagnosis and early therapy may restore renal function, reduce reliance on long-term RRT, and decrease mortality associated with disease complications.

	Keywords: ANCA-Associated Vasculitis; Systemic Lupus Erythematosus; End-Stage Renal Disease; Hemodialysis; Autoimmune Markers
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