

# IMMUNOSUPPRESSIVE TREATMENT FOR GLOMERULONEPHRITIS AND SYSTEMIC DISEASES IN ELDERLY PATIENTS (ONE CENTER EXPERIENCE)

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## OBJECTIVES

Immunosuppressive therapy in older people is considered to be poorly tolerated and associated with severe adverse events due to comorbidities. However, conditions like rapidly progressive glomerulonephritis and severe nephrotic syndrome may demand immunosuppression. We aimed to evaluate outcomes of immunosuppressive treatments in our cohort of elderly patients.

## METHODS

Using electronic database we searched all cases aged over 60, treated with immunosuppressants for biopsy proven glomerular diseases of native kidneys during 1994-2012.

Treatment regimens included corticosteroids alone or in combination with cyclophosphamide, chlorambucil, mycophenolates, azathioprine and cyclosporine; cyclosporine alone and rituximab for primary and secondary glomerulonephritis. For "primary" AL-amyloidosis we used melphalan with prednisolone or dexamethasone, or bortezomib.

## RESULTS

Study group included 393 cases (15% out of 2701 admissions for immunosuppression), 209 females and 184 males, median age 69 [61; 81] years. Among primary glomerulonephritis membranous nephropathy (43%) and focal segmental glomerulosclerosis (35%) prevailed. In ANCA-associated vasculitides dominated microscopic polyangiitis - 50% of admissions. Main diagnosis, treatment regimens and outcomes are shown in table.

N of cases	Primary GN	Lupus nephritis	ANCA-associated vasculitis	Cryoglobulinemic vasculitis	Henoch-Shonlein purpura	Goodpasture's disease	Primary amyloidosis	Total	%
Total	175	28	124	4	3	1	58	393	
Prednisone alone	10	14	38	2	-	-	-	64	16
Prednisone+ cyclophosphamide	16	6	56	2	3	1	-	84	21
Prednisone+ chlorambucil	6	-	-	-	-	-	-	6	2
Prednisone+ azathioprine	-	7	18	-	-	-	-	25	6
Prednisone+ mycophenolate	14	1	8	-	-	-	-	23	6
Prednisone+ cyclosporine	77	-	-	-	-	-	-	77	19
Cyclosporine alone	49	-	-	-	-	-	-	49	12
Rituximab	3	-	4	-	-	-	-	7	2
Melphalan+ prednisone	-	-	-	-	-	-	32	32	8
Melphalan+ dexametasone	-	-	-	-	-	-	16	16	4
Bortezomib	-	-	-	-	-	-	10	10	3
Complete remissions	89	5	13	-	-	-	-	107	27
Partial remissions	68	21	100	3	3	-	50	245	62
Total remissions	157	26	113	3	3	-	50	352	89
Adverse events	8	5	17	2	1	-	4	37	16
Death	2	2	7	1	0	1	3	16	4

## CONCLUSIONS

In vast majority of admissions indication for immunosuppression was nephrotic syndrome or rapidly progressive renal failure due to membranous nephropathy, focal segmental glomerulosclerosis, "primary" AL-amyloidosis and microscopic polyangiitis, which is characteristic for older population. Therapeutic regimens shifted over last decade towards selective immunosuppressants and biological agents, but as we evaluated treatment for almost 20 years, most widely used regimens for primary and secondary glomerulonephritis were prednisolone combined with cyclophosphamide or cyclosporine; and for "primary amyloidosis" – melphalan with prednisolone. However, remissions, complete or partial, were seen in 89%, adverse events rate was as low as 9%, and proportion of deaths - only 4%, suggesting that immunosuppressive treatment may be effective and well tolerated even in elderly patients with severe glomerular diseases.

## REFERENCES:

1. Bomback et al. *Kidney Int* 79:757, 2011
2. Deegens et al. *Drugs Aging* 24:717, 2007
3. Glasscock. *Clin Geriatr Med*. 29:579-91, 2013
4. Hogan SL et al. *Annals Int Med* 2005; 143(9):621-631
5. Moutzouris et al. *CJASN* 10:473, 2009;
6. Waldmann et al. *CJASN* 2:445, 2007

