

ANTI PHOSPHOLIPASE A2 RECEPTOR ANTIBODIES IN DIABETIC PATIENTS WITH PROTEINURIA

Sibel Gulcicek¹, Banu Erkalma Senates², Serkan Feyyaz Yalin², Sinan Trabulus², Sennur Kose¹, Mehmet Riza Altiparmak², Nurhan Seyahi²

¹Istanbul Training and Research Hospital, Nephrology, Istanbul, TURKEY,

²Istanbul University, Cerrahpasa Medical Faculty, Nephrology, Istanbul, TURKEY.

OBJECTIVES

Diabetic nephropathy is the most important cause of chronic kidney disease and end-stage renal disease. Membranous nephropathy is the most seen non-diabetic renal disease in diabetic patients. Presence of phospholipase A2 antibody is very significant for diagnosis and prognosis of membranous nephropathy.

METHODS

Sequential diabetic patients of our outpatient nephrology clinic with spot urine protein creatinine ratio more than 0,3 were enrolled in the study. Levels of phospholipase A2 receptor antibody were examined with Elisa method. Demographic findings, laboratory data and spot urine protein levels of patients were taken from medical records. Duration of diabetes mellitus, presence or absence of retinopathy and hypertension and prescription drugs were recorded. The association between serum levels of phospholipase A2 receptor antibody and proteinuria, creatinine clearance and laboratory data was examined.

RESULTS

Eighty eight patients were enrolled in the study. Demographic, clinical and laboratory data of the patients are shown in table.

Fifty five

percent (n=62) of the patients used either ACE-inhibitors or ARB. The distribution of phospholipase A2 receptor antibody levels are shown on Figure

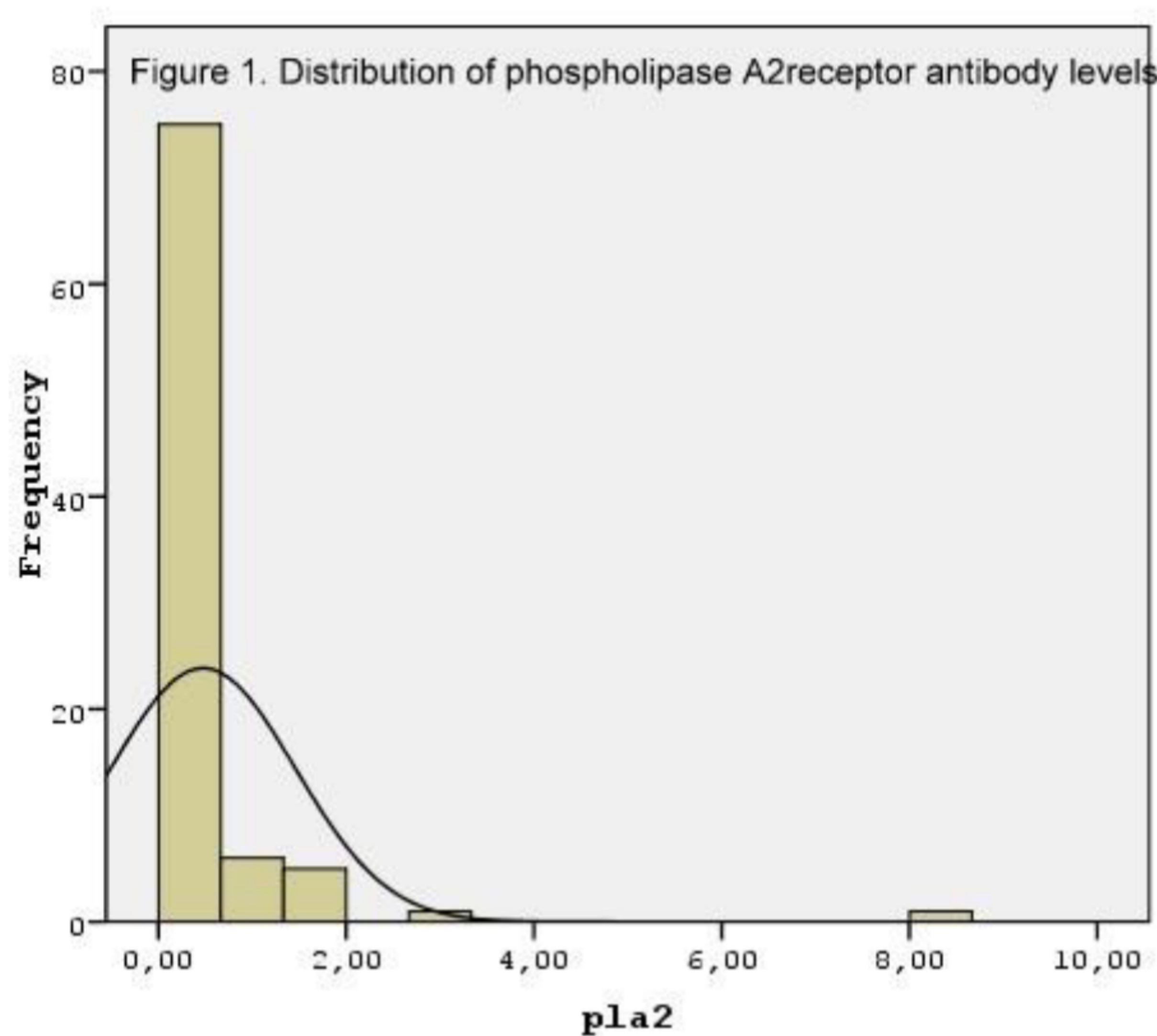
1. Fifty two percent (n=46) of the patients had phospholipase A2 receptor antibody levels which were close to lower limit of laboratory range values.

Seventeen percent (n=15) of the patients had phospholipase A2 receptor antibody levels which were four fold of the lower limit of laboratory range

values. According to this, the comparison of patients with low levels of phospholipase A2 receptor antibody and high levels of phospholipase A2 receptor antibody is shown on Table.

	All patients (n=88)	Low PLA2(n=46)	High PLA2(n=15)	p
Age (year)	61,8 ±10,4	60,7±9,1	63,2±13,1	0,492
Gender(male, %)	54,1	32,6	46	0,365
Diabetes duration (years)	13,2±10,4	13,8±7,6	10,8±6,5	0,301
Glucose (mg/dl)	177±77	172±65	211±114	0,388
Creatinine (mg/dl)	1,7±0,8	1,8±0,8	1,5±0,6	0,172
Albumin (g/dl)	3,8±0,4	3,7±0,4	3,8±0,3	0,668
HbA1C	7,9±1,4	7,7±1,2	8,9±1,7	0,025
Spot urine protein creatinine ratio	2,9±2,9	3,4±3,2	1,7±1,8	0,027
GFR (ml/min)	45,5±24	42,0±20,3	50,9±21,1	0,145
Diabetic retinopathy (%)	53,4	60,9	54,5	0,297

Table. Demographic, Clinical and Laboratory Data of the patients



CONCLUSIONS

Levels of phospholipase A2 receptor antibody may be found high in some of the diabetic patients with proteinuria. It was found that patients with high levels of phospholipase A2 receptor antibody had poorly controlled diabetes and these ones also had less proteinuria. The association of levels of phospholipase A2 receptor antibody and secondary nephropathy may be revealed with biopsy.

REFERENCES:

1. Wilfred DC, Mysorekar VV, Venkataramana RS et al. Nondiabetic renal disease in type 2 diabetes mellitus patients: a clinicopathological study. *J Lab Physicians*. 2013 Jul-Dec; 5(2): 94–99
2. Dai H, Zhang H, He Y. Diagnostic accuracy of PLA2r autoantibodies and glomerular staining for the differentiation of idiopathic and secondary membranous nephropathy: an updated meta-analysis. *Sci rep*. 2015 Mar 5;5:8803
3. Pathogenesis, clinical manifestation and natural history of Diabetic nephropathy. In Floege J, Richard JJ, Feehally J, eds. *Comprehensive Clinical Nephrology*, 4th ed.: Mosby, 2011, p. 353-36433

