

PREVALENCE OF ANTIBODIES TO PHOSPHATIDYLSERINE IN AUTOIMMUNE DISEASES.

KEEDY KJ, SANTOS ME and LOPEZ LR.

From READS MEDICAL PRODUCTS, Inc. RESEARCH AND DEVELOPMENT DIVISION, WESTMINSTER, COLORADO, USA

High levels of anticardiolipin (aCL) antibodies are often found in the serum of patients with various autoimmune disorders and have been associated with *in-vitro* coagulation assay abnormalities, thrombosis, thrombocytopenia and recurrent fetal loss. Currently, phosphatidyl serine (PS) is being considered to be a more physiologic phospholipid antigen and its use in ELISA systems should provide more clinically relevant results. We studied the prevalence of IgG, IgM and IgA aPS antibodies by ELISA in a series of samples obtained from 41 systemic lupus erythematosus (SLE), 30 progressive systemic sclerosis (PSS), 30 rheumatoid arthritis (RA) patients and compared these results to those of 50 serum samples obtained from healthy unselected blood donors. These patients were followed in rheumatology clinics and the diagnosis of autoimmune disease was based on ARA criteria. IgG and IgM aPS values were standardized against reference samples from the Antiphospholipid Standardization Laboratory (IgG $R^2=0.94$, IgM $R^2=0.92$). The results are expressed in GPL and MPL units. IgA aPS values, in APL units, were assigned using an in-house aCL calibrator. Each sample was assayed in duplicate and the normal ranges were established by the mean value of the unselected healthy individuals + 3 S.D. The prevalence is reported as the percent of positive samples above the normal range.

Serum	Mean GPL Prevalence		Mean MPL Prevalence		Mean APL Prevalence	
	+1 S.D.	GPL(%)	+1 S.D.	MPL(%)	+1 S.D.	APL(%)
SLE	26.8±22.8	29.3	14.3±18.7	2.4	26.6±17.0	34.1
RA	21.2±8.5	23.3	10.0±3.9	0.0	32.5±15.6	53.3
PSS	17.4±6.4	6.7	16.2±11.8	13.3	23.9±18.1	16.7
Healthy	13.7±5.2	4.0	11.7±5.5	2.0	15.9±3.9	2.0

These results indicate statistically significant higher serum levels and prevalence of IgG aPS antibodies in patients with SLE ($p=0.0034$) and RA ($p=0.0102$) when compared to healthy individuals. Patients with PSS show a statistically significant increase in IgM aPS antibody level ($p=0.033$). IgA aPS antibody levels are elevated in SLE ($p=0.0001$), RA ($p<0.0001$) and PSS ($p=0.0296$). RA patients showed higher IgA aPS antibody levels than SLE and PSS. IgG and IgA aPS serum levels are more prevalent and possibly the most clinically significant in autoimmune disorders.

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