

ANTIBODIES TO PROTHROMBIN AND BETA-2-GLYCOPROTEIN I IN SELECTED LUPUS ANTICOAGULANT POSITIVE SAMPLES. Ken J. Dier, Lorrie W. Olsen, Amy W. Whittier, Catherine A. Fink, Luis R. Lopez. Corgenix, Inc., Westminster, Colorado, USA.

Lupus anticoagulants (LA) are a heterogeneous group of immunoglobulins (IgG, IgM, IgA) which inhibit *in vitro* phospholipid-dependent coagulation assays. LA require prothrombin or beta-2 glycoprotein I (B2GPI) as cofactors for optimal immunologic binding. Antibodies to these cofactors were determined in 20 selected plasma samples with strong LA activity. Anti-prothrombin (aPT) and anti-B2GPI ELISAs results were reported in arbitrary units and the cut-off was pre-established at 20 units for both assays. The prevalence of aPT antibodies in healthy controls was 4% for IgG and 2% for IgM and IgA. Six plasma samples with abnormal coagulation profiles, which did not fulfill LA diagnostic criteria, tested negative for aPT, anti-B2GPI, anti-phosphatidylserine and anti-cardiolipin antibodies confirming the specificity of the assays. Of the 20 LA plasma samples, 16 (80%) were positive for aPT and 17 (85%) for anti-B2GPI antibodies. Ten samples (50%) were positive for IgG, 12 (60%) for IgM and 7 (35%) for IgA aPT antibodies. The four aPT negative samples tested positive for anti-B2GPI antibodies. All 20 LA samples were positive for aPT or anti-B2GPI antibodies, 13 (65%) to both, 4 (20%) to anti-B2GPI only, and 3 (15%) to aPT only. In summary, aPT and anti-B2GPI antibodies are frequently found in LA samples as single isotype or in combination. All the LA samples had antibodies to prothrombin or to B2GPI. The most common occurrence was the combination of aPT with anti-B2GPI antibodies. In 3 LA samples aPT was the only contributor to LA activity, and in 4 samples it was anti-B2GPI. Testing for both aPT and anti-B2GPI antibodies may be a valuable tool to confirm the presence of LA. The clinical profiles of patients with antibodies against one versus both cofactors should be further investigated.

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