

106. ANTIPHOSPHOLIPID ANTIBODIES BIND TO ACTIVATED, BUT NOT RESTING ENDOTHELIAL CELLS

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Antiphospholipid antibodies (aPL) are autoantibodies that cause pregnancy failure, but the mechanism remains unknown. During human pregnancy, maternal blood is supplied to the placental via the uterine. It has been suggested that aPL bind to and activate endothelial cells in the spiral arteries resulting in the formation of procoagulant surfaces which lead to clot formation and pregnancy failure. In this study, we examined the ability of aPL in patient sera and monoclonal aPL to bind to and activate endothelial cells in culture. Our data show that aPL in patient sera did not bind to either resting or PMA-activated endothelial cells. One monoclonal aPL, IIC5, did bind to activated and apoptotic endothelial cells, but not to resting endothelial cells. In addition, our data demonstrate that monoclonal aPL did not activate resting endothelial cells as indicated by the expression of ICAM-1 and E-selectin or NF-kappa B activation. All these data suggest aPL do not activate resting endothelial cells. We conclude that aPL do not induce pregnancy loss by activating vascular endothelial cells with subsequent clot formation.