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Poster Presentations

P-130
High titers of phosphatidylserine/prothrombin antibody in non-APS RIF patients

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Background: Immunological causes of recurrent implantation failure (RIF) are of controversial aspects of implantation; mainly because antiphospholipid antibodies (aPL) are an important cause of recurrent pregnancy loss. This is why they may play a role in RIF. Recently, strong association between anti phosphatidylserine/prothrombin antibodies, as an extra-criteria aPL, and the clinical manifestations of antiphospholipid syndrome (APS), one of the reasons for RIF, is highlighted. So, the emerging role of aPL on implantation and pregnancy complications led us to investigate these anti-bodies in RIF patients.

Objective: High titers of phosphatidylserine/prothrombin antibody in non-APS RIF patients.

Materials and Methods: For this respect a pilot study was designed to compare titers of IgG/IgM antibodies against cardiolipin, B2GPI, phosphatidyl ethanolamin and anti-phosphatidylserine/prothrombin of RIF and healthy women. After obtaining of written constant, blood samples were collected from 30 RIF women referred to Royan Institute through ART procedure and 10 volunteer healthy women with at least one child (control group) and detection of aPLs was conducted using Enzyme-Linked Immunosorbent Assay. Also lupus anti-coagulant test was performed on all samples.

Results: The results of anti-coagulant test as well as anti cardiolipin antibody and B2GPI antibody tests showed that none of the women had the APS. The level of other tested antibodies in RIF women was not significantly different from the control group although some of aPLs (antibodies against cardiolipin, B2GPI and phosphatidyl ethanolamine) had higher levels in RIF women vs. control. Surprisingly titer of aPS/PT antibody in RIF women was significantly higher than healthy women.

Conclusion: Although the test results showed that RIF women do not have APS but altered levels of their aPL titers are not negligible specially anti phosphatidylserine/prothrombin antibodies. It may be better to investigate non-criteria factors in the category of immunological reasons for implantation failure in non-APS RIF women and take a deeper look at the issue.

Key words: *Embryo Implantation, Antiphospholipid Antibodies, Enzyme-Linked Immunosorbent Assay.*