THROMBOPHILIA AS A REASON OF REPEATED MISCARRIAGES AFTER IVF

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270 women that had experienced 2 or more previously failed IVF cycles were tested for the presence of inherited (factor V Leiden (FVL) mutation, prothrombin G20210A mutation, methylenetetrahydrofolate reductase (MTHFR) C677T mutation and deficiencies in proteins S and C, antithrombin III, plasminogen) or acquired (hyperhomocysteinemia, antiphospholipid antibodies: autoantibodies against cardiolipin, phosphatidyl serine, phosphatidyl inositol, phospatidic acid, β2-glycoprotein I, annexin V IgG, IgM class) thrombophilic factors.
Mild hyperhomocysteinemia was the most common thrombophilic factor in the examined group. 25% of patients had total homocysteine level above 10,2 mcmol/l. 40% of women had their total homocysteine level above the “target” level which is 9 mcmol/l.
Women with proven diagnoses of antiphospholipid syndrome were checked for different autoantibodies on the 5th day after embryo transfer. The increased titer of any antiphospholipid antibody tested was found in 19% of patients, while the absolute majority (84%) displayed elevated levels of annexin-V antibodies.
2 FVL carriers (0.74%) were found in this group. The prevalence of heterozygous and homozygous MTHFR C677T mutation was 43,6% and 7,6% respectively which is similar to population frequency of this mutation in Belarus. No deficiencies in proteins S and C, antithrombin III, plasminogen were detected.
Conclusions: Thrombophilia plays an important role in repeated miscarriages after IVF. Mild hyperhomocysteinemia and the presence of antiphospholipid antibodies were the most common thrombophilic factors in the investigated group, while annexin-V antibodies were the most significant and reliable predictors of antiphospholipid syndrome. Therefore, women with repeated miscarriages should be tested for levels of homocysteine and annexin-V antibodies.