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PECULIARITIES OF FAMILY HISTORY IN INFERTILE WOMEN WITH INEFFECTIVE ASSISTED REPRODUCTIVE TREATMENT

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AIM

Optimization of patients' preparation to ART in order to increase the efficiency and reduce complications in stimulation of superovulation and in the further course of the pregnancy.

INTRODUCTION

Stimulation of superovulation in assisted reproductive treatment (ART) is a factor associated with activation of microthrombogenesis, yet there usually should be aggravating factors to implement them. These factors include inherited or acquired predisposition to thrombosis. Furthermore, ART ineffectiveness can be related to a disorder of microcirculation and development of microthrombi in endometrium and chorion at the early stages of pregnancy. One of the clinical guidelines aimed at identifying hereditary defects of hemostasis, when preparing the patients to in vitro fertilization, is the assessment of family history of thrombotic conditions: venous thrombosis in family members younger than 50 years, early heart attacks and strokes, signs of venous thromboembolism, varicose veins.

METHODS

The study involved 60 women with unsuccessful attempts of in vitro fertilization in history – I group and II group (control group) 30 healthy women. Clinical examination included a detailed study of family history of thrombotic conditions. All patients were examined for antiphospholipid syndrome (acquired thrombocytopathy) and hereditary forms of thrombocytopathy. Laboratory diagnosis of antiphospholipid syndrome (APS) includes determination of lupus anticoagulant and antiphospholipid antibodies by ELISA - method. Functional coagulologic methods were employed to exclude possible deficiency of natural anticoagulants, namely AT III and protein C. Assessment of thrombophilia severity was carried out by assessing the level of direct markers-complexes, such as thrombin-antithrombin complex (TAT) and D-dimer.

RESULTS

Patients of I gr. were found to have a higher percentage of compromised thrombotic history - 33%, as compared to 10% in the control gr. The structure of family history of thrombotic conditions was as follows: myocardial infarction in 30%, hemorrhagic and/or ischemic stroke - 28%, pulmonary embolism - 10%, varicose veins and venous thrombosis - 32%. Examination of hemostatic system revealed hypercoagulable syndrome due to increased activity of internal coagulation mechanism factors and enhanced functional activity of thrombocytes (FAT) in the I gr. in 45% women, while 20% of women were found to have significant impairments in protein C system. The number of patients with increased FAT in the II gr. comprised only 10% and none of them had disorders in protein C system. Hyperhomocysteinemia was observed in 31.6% patients of the I gr. and in 20% patients of the II gr. Circulating lupus anticoagulant (CLA) was found in 41.7% women of the I gr. CLA was observed in 16.7% patients of the II gr.

CONCLUSION

Reduction in hypercoagulation factors in the 2nd group might have contributed to successful fertilization after IVF. In order to increase ART effectiveness and reduce the risk of thrombotic complications, it is recommended to provide a thorough study of family history of thrombotic conditions followed by diagnosis of hereditary and acquired thrombophilia.