

17th World Congress of the Academy of Human Reproduction

15–18 March 2017
Rome, Italy

TITLE

POLYCYSTIC OVARY SYNDROME (PCOS) AND VENOUS TROMBOEMBOLISM

AUTHOR/S

Lapina I (RU) [1], Ozolinya L (RU) [2], Dobrokhotova J (RU) [3], Gavrilov M (RU) [4]

ABSTRACT

Objective: Hormonal therapy the most effective treatment of polycystic ovary syndrome (PCOS), but an association between oral contraceptive and VTE has been shown. Since pulmonary embolism represents an important source of potentially fatal event attributable to hormonal therapy, reducing VTE risk appears to be a relevant strategy to improve the benefit/risk ratio of oral contraceptive.

Methods: Genotyping was performed in the genes F5; F2; MTHFR, SERPINE1, THBS4, F7, ITGA2, ITGB3, as well as ACE and VKORC1. **Patients:** In this prospective study we analyzed the results of a comprehensive clinical and laboratory examination of 120 young women, aged 18-45 with PCOS. **Results:** Prevalence of increased platelet aggregation and decreased plasma fibrinolytic activity before treatment was in as many as 30% of cases. All of them were screened for antiphospholipid syndrome which was not identified. The results of the investigation of polymorphism SERPINE1 are extremely interesting. Plasminogen activator inhibitor gene encodes a protein that plays a critical role in the regulation of fibrinolysis. When the concentration of PAI-1 becomes higher, the anticoagulant activity of the fibrinolysis system decreases. This process leads to an increased risk of thrombosis. Variant genotype 4G / 4G patients with PCOS was observed in 31,6% (n =38) of all cases, genotype 5G / 5G patients with PCOS detected in 35.0% of cases (n = 42), heterozygous variant genotype 5G / 4G was observed in 33,3% (n=40).

Conclusion: One of the challenges of modern medicine is the problem of early prevention of thrombotic complications, based on a careful study of these coagulation statuses, and - identifying the causes of these changes in every case of thrombophilia, including the identification of genetic defects of coagulation and fibrinolytic systems.

INSTITUTE

[1] Russian National Research Medical University, Moscow, Russia, [2] Russian National Research Medical University, Moscow, Russia, [3] Russian National Research Medical University, Moscow, Russia, [4] Russian National Research Medical University, Moscow, Russia