

PP-CR-76

The Association of *rs12444979* and *rs2241423* Genotype Combination with the Risk of Uterine Hyperplastic Processes

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Background & Hypothesis:

A lot of women of fertile and predecidual age have hyperplastic processes of endometrium having a risk of malignization in 10-50% of cases. The present study investigated an association between *rs12444979* and *rs2241423* polymorphisms and risk of uterine hyperplastic processes in Russian women.

Methods:

Study sample comprised 1873 unrelated women including 908 women with uterine hyperplastic processes and 965 women of healthy control. The case and control group were of Russian origin coming from Central region of Russia. Patients with uterine hyperplastic processes were examined by experienced gynaecologists and instrumental investigations (ultrasound diagnosis, hysteroscopy) had been done. Genotyping of single nucleotide polymorphisms *rs12444979* and *rs2241423* was performed using TaqMan assays. APSampler software was utilised to assess the association of genotype combinations with occurrence of uterine hyperplastic processes.

Results:

The frequency genotype combination of *C rs12444979* with *G rs2241423* was 95.9% in patients with uterine hyperplastic processes and 93.71% in control group (Pperm = 0.05, OR = 1.57, 95% CI 1.03-2.40).

Discussion & Conclusion:

The combination of alleles *C rs12444979* and *G rs2241423* is the risk factor of developing uterine hyperplastic processes in Russian women. The study was supported by the project (“Studying of the genetic risk factors for multifactorial diseases”).