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Association of Genetic Polymorphisms *rs4374421, rs7759938* and *rs466639* with Uterine Hyperplastic Processes

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Background & Hypothesis:
Uterine hyperplastic processes such as of endometrium, uterine leiomyoma, genital endometriosis are mostly common pathological conditions among gynaecological diseases. The disorders have shared pathogenetic mechanisms and may be diagnosed in combinations.

Methods:
Study sample comprised 1873 unrelated women including 908 women with uterine hyperplastic processes and 965 women of healthy controls. 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) have been done. Genotyping of single nucleotide polymorphisms *rs4374421, rs7759938* and *rs466639* was performed using TaqMan assays. APSampler software was utilised to assess the association of genotype combinations with occurrence of uterine hyperplastic processes.

Results:
It has been observed that the combination of genetic variants *C rs4374421* with *C rs7759938* and *C rs466639* occur in 20.81% of affected women and in 27.78% of healthy women (P = 0.0004, ĐžR = 0.68, 95% CI, 0.55-0.85).

Điscussion & Conclusion:
The study revealed a protective effect of allelic combination of *C rs4374421* with *C rs7759938* and *C rs466639* against uterine hyperplastic processes. The study was supported by the project ("Studying of the genetic risk factors for multifactorial diseases").