NAT2, GST T1, GST M1 GENE POLYMORPHISM AND THE RISK OF THE DEVELOPMENT OF PELVIC ORGAN PROLAPSE AND STRESS URINARY INCONTINENCE.

Hypothesis / aims of study
The estimation of C481T(S1), G590A(S2), G857A(S3) polymorphisms in acetyltransferase 2 (NAT2) genes and the deletion polymorphisms of the gene glutathione-S-transferase T1 (GST T1(del)) and glutathione-S-transferase M1 (GST M1(del)) with the risk of pelvic organ prolapse (POP) stress urinary incontinence (SUI) was determined.

Study design, materials and methods
The study groups included the patients with POP (POP-Q scale: 1, 2, 3, 4), n=67 and the patients with POP + SUI symptoms combination, n=63. Women free of POP and no complaints on urinary incontinence were included in the control group, n=89. DNA samples were isolated from the blood. The polymorphism analysis was carried out by PCR-RFLP technique.

Results, Interpretation of results
The statistically significant differences of NAT2, GST T1, GST M1 polymorphisms were registered between POP + SUI patients and these ones in the control group. N/N genotype of NAT2 gene decreased the probability of POP + SUI approximately by 3.7 times (OR = 3.67 95% CI: 1.01-13.38). A combined genotype of GST T1/GST M1 decreased probability of POP + SUI combination by 2.5 times (OR = 2.5 95% CI: 1.19-2.24). del GSTM1 elevated the chance of POP + SUI combination by approximately 1.5 times (OR = 1.49 95% CI: 1.04-2.15).

Concluding message
C481T(S1), G590A(S2), G857A(S3) polymorphisms of NAT2 gene and the deletions of GST T1 and GST M1 genes are associated with a higher risk of POP + SUI combination.

Disclosures
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