

Effect of folic acid in preventing aberrant methylation of fetal endometriosis susceptibility gene HOXA10.

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Abstract

OBJECTIVE:

To detect aberrant methylation in the promoter region of fetal endometriosis susceptibility gene homeobox-10 (HOXA10) in women with and without folic acid supplementation and explore the effect of folic acid in optimizing intrauterine environment.

METHODS:

Thirty-six cord blood specimens were collected between January, 2010 and December, 2012 from pregnant women with endometriosis, including 22 with folic acid treatment and 15 without. Methylation-specific polymerase chain reaction (MSP) and bisulfite salt modified sequencing (BSP) were employed to detect aberrant methylation of HOXA10 gene in these specimens.

RESULTS:

The methylation rate of HOXA10 gene differed significantly between pregnant women with endometriosis taking folic acid and those who did ($P < 0.05$).

CONCLUSION:

Folic acid treatment can significantly reduce the methylation rate of fetal endometriosis susceptibility gene HOXA10.