Abstract

Objective. To assess the association between intake of folate and B vitamins and the incidence of spontaneous abortion (SA) according to the maternal methylenetetrahydrofolate reductase (MTHFR) polymorphisms (677 C>T and 1298 A>C). Material and Methods. We conducted a nested case-control study within a perinatal cohort of women recruited in the state of Morelos, Mexico. Twenty-three women with SA were compared to 74 women whose pregnancy survived beyond week 20th. Intake of folate and B vitamins respectively, was estimated using a validated food frequency questionnaire. Maternal MTHFR polymorphisms were determined by PCR-RFLP and serum homocysteine levels by HPLC. Results. Carriers of MTHFR 677TT and 1298AC genotypes respectively showed an increased risk of SA (OR 677TT vs. CC/CT=5.0; 95% CI: 1.2, 20.9 and OR 1298 AC vs. AA=5.5; 95% CI: 1.1, 26.6). Conclusions. Our results support the role of MTHFR polymorphisms as a risk factor for SA, regardless of dietary intake of B vitamins.

Keywords

MTHFR; 677 C>T and 1298 A>C polymorphisms, spontaneous abortion, Mexico.