NO ASSOCIATION BETWEEN FUNCTIONAL POLYMORPHISMS IN MTHFR AND CHILDHOOD SCHIZOPHRENIA IN LATVIAN POPULATION

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Background

Methylenetetrahydrofolate reductase (MTHFR) catalyzes the conversion of 5,10-methylenetetrahydrofolate to 5-methyltetrahydrofolate, a co-substrate for homocysteine re-methylation to methionine. Previously it has been reported, that there is association between MTHFR mutations C677T and A1298C, and increased risk of schizophrenia, there are also publications without any association

Aim

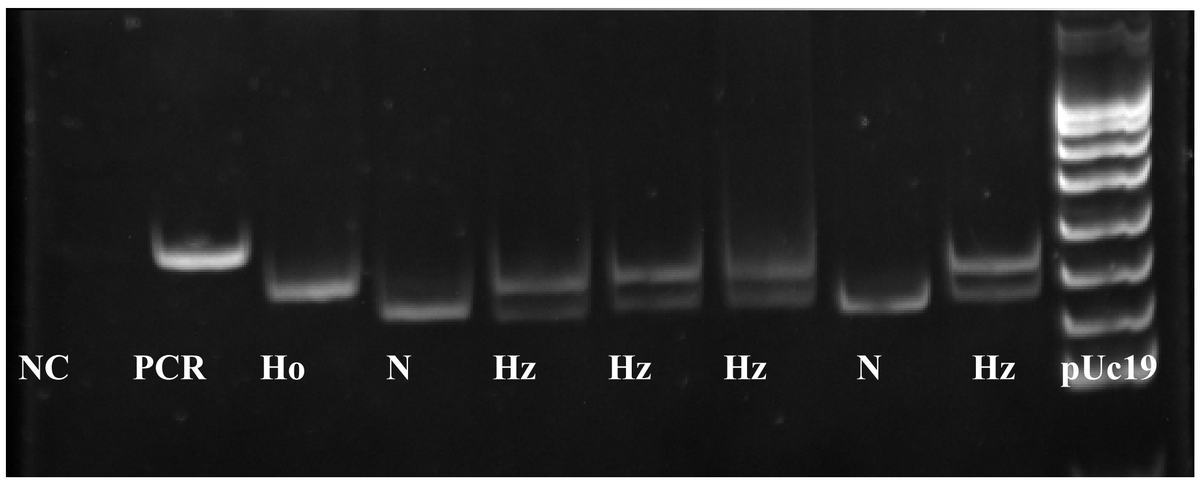
Detect frequency of MTHFR polymorphisms C677T and A1298C in children with schizophrenia, and to compare results with control group

Materials and methods

The patient group was 53 children with schizophrenia, but the control group consisted of 150 volunteers. DNA was extracted from whole blood and purified by standard phenol/chloroform protocol. The presence of C677T and A1298C mutations was analysed using PCR with subsequent restriction enzyme *HinfI* and *MboII* digestion, respectively, and detected in PAGE

Results

The observed frequency of the T allele of the C677T mutation was 0,324. There were no statistically significant differences between patient group and control group- 0,319 (p value 1,0). The observed frequency of the C allele of the A1298C in patients group was 0, 311 whereas in control group – 0,367, the difference was not statistically significant (p value 0,395).



	Wild type (C677T)	Wt/ C677T	C677T/ C677T
Wild type (A1298C)	6	16	5
Wt/ A1298C	12	6	1
A1298C/ A1298C	6	1	0

Conclusions

1. The present results suggest that the investigated MTHFR polymorphisms do not influence susceptibility of schizophrenia
2. It is necessary to continue this study with a greater number of patients.

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