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Linkage and association of DRD۲ gene TagI polymorphism with schizophrenia in an Iranian population

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Abstract

Background: D۲ dopamine receptor gene has been reported to be one of the most relevant candidate genes in schizophrenia. In this study, we investigated the association between TaqIA and TaqIB dopamine D۲ receptor polymorphisms and psychopathology of schizophrenia. Methods: The study subjects were ۳۸ acutely exacerbated schizophrenic patients who were all Iranian descent. The control population consisted of ۶۳ healthy individuals with almost the same age as patients and were also of Iranian decent. The TaqIA and TaqIB genotypes, the A۱ and A۲ alleles, and the B۱ and B۲ were determined by restriction fragment length polymorphism of the amplified DNA fragments by polymerase chain reaction. Results: For each polymorphism (A or B) the patients were categorized according to their genotype into three groups; i.e. the patients with alleles A۱/A۱, A۱/A۲, A۲/A۲; B۱/B۱, B۱/B۲, and B۲/B۲. No significant association was found between Taq۱A or Taq۱B gene polymorphisms and schizophrenia in patients compared to the controls. When study subjects were stratified according to their gender, the distribution of the A۱/A۱ genotype did was significantly different in both men and women (patients vs. controls). Conclusion: Our findings show that there is no genetic association between Taq۱A and Taq۱B gene polymorphisms and schizophrenia. Further clinical studies should be conducted to confirm and further evaluate these findings.

Author keywords

DRD۲ gene; Polymorphism; Schizophrenia; TaqI

Indexed Keywords

EMTREE drug terms: DNA fragment; dopamine ۲ receptor; nucleotidyltransferase; Taq polymerase; Taq۱A polymerase; Taq۱B polymerase

EMTREE medical terms: adult; article; clinical article; controlled study; female; genetic association; genetic linkage; genetic polymorphism; genotype; human; Iran; male; nucleotide sequence; polymerase chain reaction; restriction fragment length polymorphism; risk factor; schizophrenia; sex difference

MeSH: Arabs; Case-Control Studies; Female; Gene Frequency; Genotype; Humans; Iran; Linkage (Genetics); Male; Middle Aged; Polymerase Chain Reaction; Polymorphism, Genetic; Receptors, Dopamine D۲; Schizophrenia; Sex Factors; Taq Polymerase

Medline is the source for the MeSH terms of this document.

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