Relationship between polymorphisms in the proline dehydrogenase gene and schizophrenia risk

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ABSTRACT. Previous studies have suggested that an association exists between the proline dehydrogenase gene (PRODH) and increased schizophrenia risk. We examined the prevalence of the PRODH 757C/T (Arg185Trp), 1766A/G (Gly521Arg), and 1852G/A (intronic mutation) polymorphisms in 175 patients with schizophrenia and 185 control subjects. All subjects were of Iranian ancestry. The PRODH 757TT, 1852AA, and 1766GG genotypes were associated with an increased risk of schizophrenia (odds ratio = 1.38, 95% confidence interval: 0.88-2.16, P = 0.001, P = 0.001, respectively). The activity alleles in the PRODH genotype combinations were associated with an increased risk of schizophrenia (haplotype analysis, TAG genotype P = 0.007). Our findings support a major role for the PRODH 757TT, 1766GG, and 1852AA genotypes alone and in combination for schizophrenia susceptibility.

Key words: Haplotype; Proline dehydrogenase; Schizophrenia