精神分裂病におけるNMDA型受容体サブユニットNMDAR1遺伝子の解析

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ANALYSIS OF GENE ENCODING THE HUMAN N-METHYL-D-ASPARTATE RECEPTOR (NMDAR1) IN SCHIZOPHRENICS

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Research Abstract

As a preliminary study, it was investigated in normal Japanese whether there was a mutation in the gene encoding the human N-methyl-D-aspartate receptor (NMDAR1) or not. Subjects were 32 normal volunteers of Japanese, who consisted of 18 males and 14 females. It has been alr eady reported that there are two portions showing a mutation in the gene encoding the human NMDAR1 in normal Eur opeans and Americans (12694 in exon 21 and 6254 in exon 7). In the present study, the existence of the already-known mutation in the two portions was separately examined with PCR-RFLP methods in the nor mal Japanese. As a result, no mutation was detected in either of the two portions. However, in one of the two portions (12694 in exon 21), the length of DNA band finally produced with restriction endonuclease treatment following PCR was long beyond our expectations from the already-known report. Futher, in another portion (6254 in exon 7), the length of DNA band after restriction endonuclease treatment was short against our expectations.
It was consider ed that the mutation in the gene encoding NMDAR1 was absent in Japanese or existed only in a much low frequency. There fore, it seemed that the analysis of mutation in the gene encoding NMDAR1 was not appropriate in schizophr enia research. Further, the difference in the length of DNA band as the PCR-RFLP-induced products was presumed to be due to the racial difference between Japanese and Weaterners.

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