Analysis of gene encoding the human n-methyl-d-aspartate receptor (nmdar1) in schizophrenics

1997 Fiscal Year Final Research Report Summary

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

Research Project

Project/Area Number

07671057

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Psychiatric science

Research Institution

KANAZAWA MEDICAL UNIVERSITY (1997)
Kanazawa University (1995-1996)

Principal Investigator

JIBIKI Itsuki KANAZAWA MEDICAL UNIVERSITY, DEPARTMENT OF NEUROPSYCHIATRY,PROFESSOR, 医学部, 教授 (60110532)

Co-Investigator(Kenkyū-buntansha)

YAMAGUCHI Kazuo KANAZAWA UNIVERSITY,INSTITUTE FOR GENE RESEARCH, PROFESSOR, 遺伝子実験施設, 教授 (00019879)

Project Period (FY)

1995 – 1997

Keywords

schizophrenia / gene analysis / NMDA receptor / NMDAR1 / PCR / RFLP / DNA

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.

URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-07671057/076710571997kenkyu_seika_hokoku_

Published: 1999-03-15