

Abstract

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Vitamin D receptor variants in 192 patients with schizophrenia and other psychiatric diseases.

Yan J, Feng J, Craddock N, Jones IR, Cook EH Jr, Goldman D, Heston LL, Chen J, Burkhart P, Li W, Shibayama A, Sommer SS.

Department of Molecular Genetics and Molecular Diagnosis, City of Hope National Medical Center, 1500 East Duarte Road, Duarte, CA 91010-3000, USA.

OBJECTIVE: Intriguing parallels have been noted previously between the biology of Vitamin D and the epidemiology of schizophrenia.

METHODS: We have scanned the Vitamin D receptor (VDR) gene by DOVAM-S (Detection of Virtually All Mutations-SSCP), a robotically enhanced multiplexed scanning method. In total, 100 patients with schizophrenia (86 Caucasians and 14 African-Americans) were scanned. In addition, pilot experiments were performed in patients with bipolar disorder (BPD) (24), autism (24), attention deficit hyperactivity disorder (ADHD) (24), and alcoholism (20). A total of 762 kb of the VDR genomic sequence was scanned.

RESULTS: R208N and V339I were each found in one African-American patient, while absent in 35 African-American controls without schizophrenia (2/14 versus 0/35, $P=0.08$). Within the power of the study ($>$ or $=1.6$ -fold relative risk), the common M1T variant is not associated with schizophrenia. In the 92 scanned patients with other psychiatric diseases, R173S was found in a single patient with bipolar disorder.

CONCLUSION: In conclusion, we describe three novel structural variants of the Vitamin D receptor. Further study is required to clarify their role, if any, in psychiatric disease.

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