Title

Apolipoprotein E genotype and survival in Alzheimer's disease

Journal

ANNALS OF NEUROLOGY, 42(3)

ISSN

0364-5134

Authors

DalForno, G

Carson, K

Troncoso, J

et al.

Publication Date

1997-09-01

DOI

10.1002/ana.410420321

M33. Apolipoprotein E Genotype and Survival in Alzheimer's Disease

Gloria Dal Forno, Kathryn Carson, Juan Troncoso, and Claudia Kawas; Baltimore, MD

The apolipoprotein E ε4 allele is more frequent in patients with Alzheimer's disease (AD) than in the general population. An accelerated accumulation of histopathological changes in patients with the ε4 allele is a proposed mechanism. If true, shorter survival would be expected, but results of previous studies have been inconclusive on this point. We tested the effect of ε4 on survival in a cohort of AD patients. One hundred eighty-eight patients with probable or definite AD, enrolled in the Johns Hopkins Alzheimer's Disease Research Center between 1984 and 1987, were followed up to the present, or until death or withdrawal. ApoE genotyping was available for 39 men and 64 women. It was known that 64.1% of the men and 69.8% of the women had at least one ε4 allele. Stratifying by sex, Cox proportional hazards analysis was used to examine the effect of ε4 on survival, covarying for age at onset and the duration of AD at entry. The mean age at entry was 71.4 years in women and 66.4 years in men. The ε4 group was 3 years older than the non-ε4 group for both sexes. The presence of the ε4 allele significantly increased the relative risk (RR) of dying in men (RR, 2.34; 95% CI, 1.10, 5.46) but not in women (RR, 1.09; CI, 0.60, 1.99). ApoE-ε4 may affect survival differently in men and women.

Study supported by grant AG05146, National Institute on Aging, NIH, and the Develbiss Fund, Baltimore, MD.