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P3-141 USE OF ANTIHISTAMINES AND THE RISK OF DEVELOPING AD: THE BALTIMORE LONGITUDINAL STUDY OF AGING

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Background: Histamine plays a role in the inflammatory process, and it is also an important neurotransmitter in the brain. There is evidence suggesting that histamine plays a role in changes in the brain leading to AD. Previous observational and clinical studies evaluated the effects of H2 blockers, but not H1 blockers, on AD. **Objective:** To investigate the association between use of histamine receptor blockers and risk of developing AD. **Methods:** Subjects were participants older than 60 years of age in the Baltimore Longitudinal Study of Aging (BLSA), at National Institute on Aging. Data on antihistamine use was collected prospectively for up to 19 years. During their biennial visits, BLSA participants were asked to list all medications they had taken since their last visit, or for the previous two years for those completing their first visit. Diagnoses of dementia and AD were made according to DSM-III-R and NINCDS-ADRDA criteria, respectively. Cox proportional hazards regression was used to estimate relative risks (RR) and confidence intervals (CI) of AD associated with histamine 1 (H1) or histamine 2 (H2) or histamine land 2 receptor blocker use. Lagging was used to minimize the possibility of differential recall. Chronological age was used as the time scale in the models. Use of antihistamines was included in the analyses as a time-dependent binary covariate defined as 0 before the first reported use of antihistamines and 1 thereafter. Analyses were adjusted for gender and education and use of NSAID or aspirin. **Results:** There were 115 incidence cases of AD (63 men, 52 women). Reported use of only H1 blockers resulted in a 57% lower risk of AD when compared to non users (RR = 0.43, 95%CI = 0.18–0.99, p = 0.05). In contrast, use of only H2 blockers did not significantly lower the risk of developing AD (RR = 0.57, 95%CI = 0.23–1.43, p = 0.23). The use of H1 and H2 in combination also did not significantly lower the risk for developing AD (RR = 0.56, 95%CI = 0.14--2.31, p = 0.42). **Conclusions:** This study suggests that users of H1 blockers may be at a decreased risk of AD. However, replication is necessary with further evaluation of the effect of length of use of H1 blockers.