

MEETING ABSTRACT

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Effects of sleep apnea and APOE ϵ 4 status on follow-up of veterans with PTSD from the Vietnam conflict

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The purpose of this ongoing study is to examine the effects of sleep apnea in veterans of the Vietnam conflict who also have Post-traumatic Stress Disorder. At the point of the first analyses of the project, 142 subjects were fully screened and 114 were found eligible. Of the 114 eligible subjects, 97 have obtained baseline Rey Auditory Verbal Learning Test (RAVLT) results and 85 have data completely scored and ready for analysis. Of these 85 completed eligible subjects, 47 have completed a 1 year follow-up, 10 have not yet been scheduled for 1 year follow-up because there has not been sufficient time elapsed since they enrolled and 28 did not complete 1 year follow-up for one of several reasons described below. This resulted in an overall drop-out rate of 28/75, or 37%, which is substantially higher than the 20% rate predicted on the basis of prior sleep studies.

One of the most striking findings of the study to date is that the drop-out rate after one year for subjects who have neither SDB nor the APOE ϵ 4 allele is only 17%, but is 73% in subjects having both risk factors. Using logistic regression analyses, this effect is statistically significant for the ϵ 4-carrier status (Wald Chi-square = 4.45, $p = 0.03$), as well as for the effect of AHI > 20 status (Wald Chi-square = 5.76, $p = 0.02$) but not significant for the interaction of ϵ 4-carrier status and AHI > 20 status (Wald Chi-square = 0.003, $p = 0.96$). Thus, the effect of APOE ϵ 4 status and AHI appears additive with drop-out rates of 40% and 44% respectively for each risk factor alone. In short, drop-out rates increase over 20% for each factor separately.

It would be extremely useful to understand why this disproportionate drop-out rate exists. Of the 85 subjects with complete data who were fully screened and entered into the study, 28 have not completed 1 year follow-up for reasons other than insufficient time elapsed since enrollment. Of these 28: 7 have been completely lost to follow-up (no telephone numbers, no recent CPRS records and no response to letters) and 5 of these 7 are ϵ 4-carriers (71%); 17 have appointments overdue more than 1 month (contact information for subjects is active and correct but there has been no responses to inquiries) and 7 of these 17 are ϵ 4-carriers (41%); and 4 consented to phone follow-ups, but would not return to the clinic and none of these are ϵ 4-carriers (0%). Further data will be presented at the time of the conference.

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