

ANALYSIS OF THE PREVALENCE OF BEHAVIORAL AND PSYCHIATRIC SYMPTOMS (BPSD) IN PATIENTS WITH ALZHEIMER'S DISEASE WITH OR WITHOUT APOE ϵ 4 ALLELE GENOTYPE

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Objective: Behavioral and Psychological Symptoms of Dementia (BPSD) are major contributors to the burden of dementia. They appear in about 50% to 80% of patients with Alzheimer's disease (AD) during its course. A genetic component to BPSD development in AD has been demonstrated. The aim of the present study was to compare the prevalence of behavioural and psychiatric symptoms among AD patients with or without APOE ϵ 4, a major genetic AD risk factor.

Materials and methods: APOE genotypes were determined in 368 patients with mild-to-moderate AD, using standard methods. Prevalence of BPSD was clinically obtained.

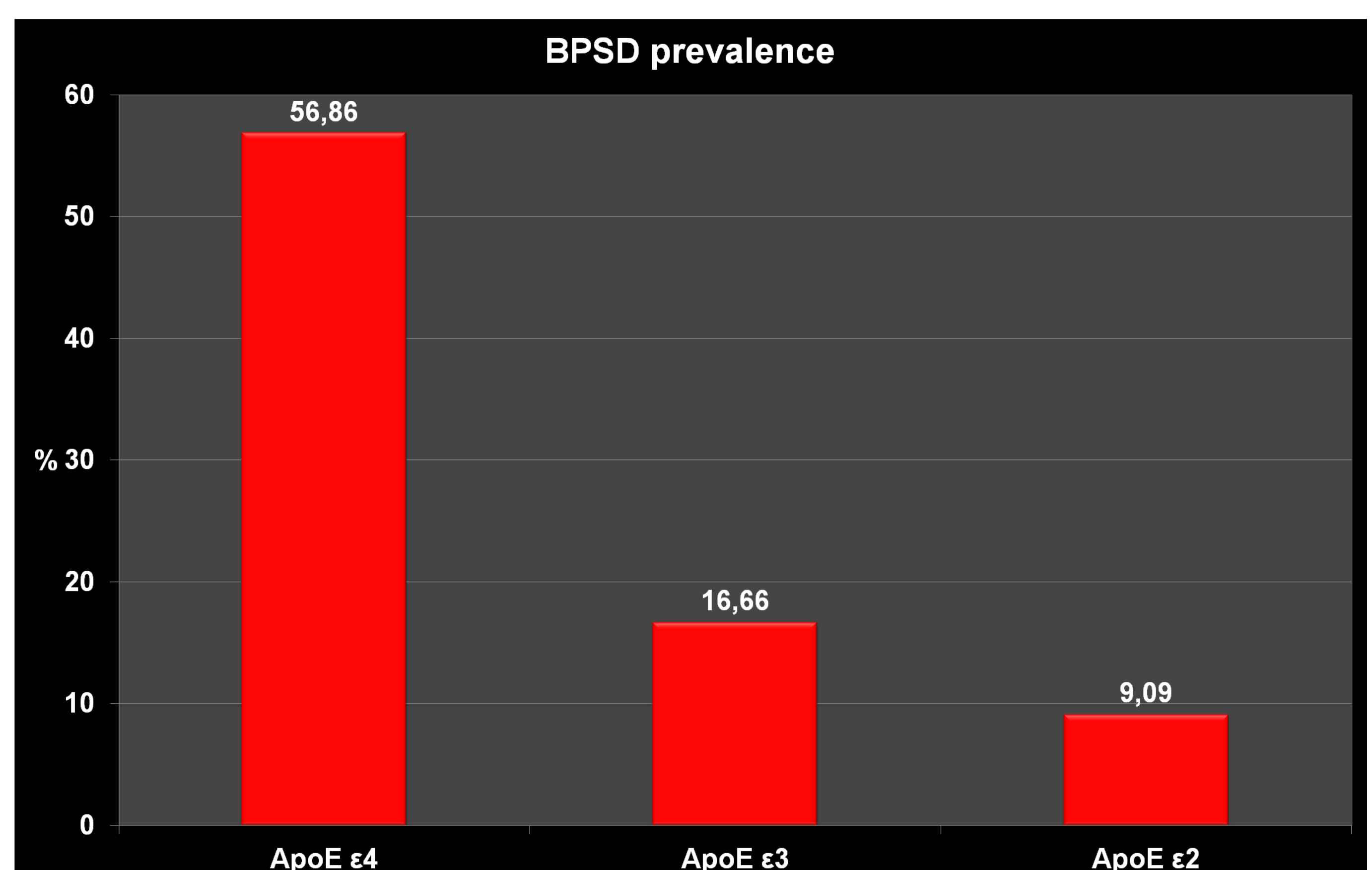
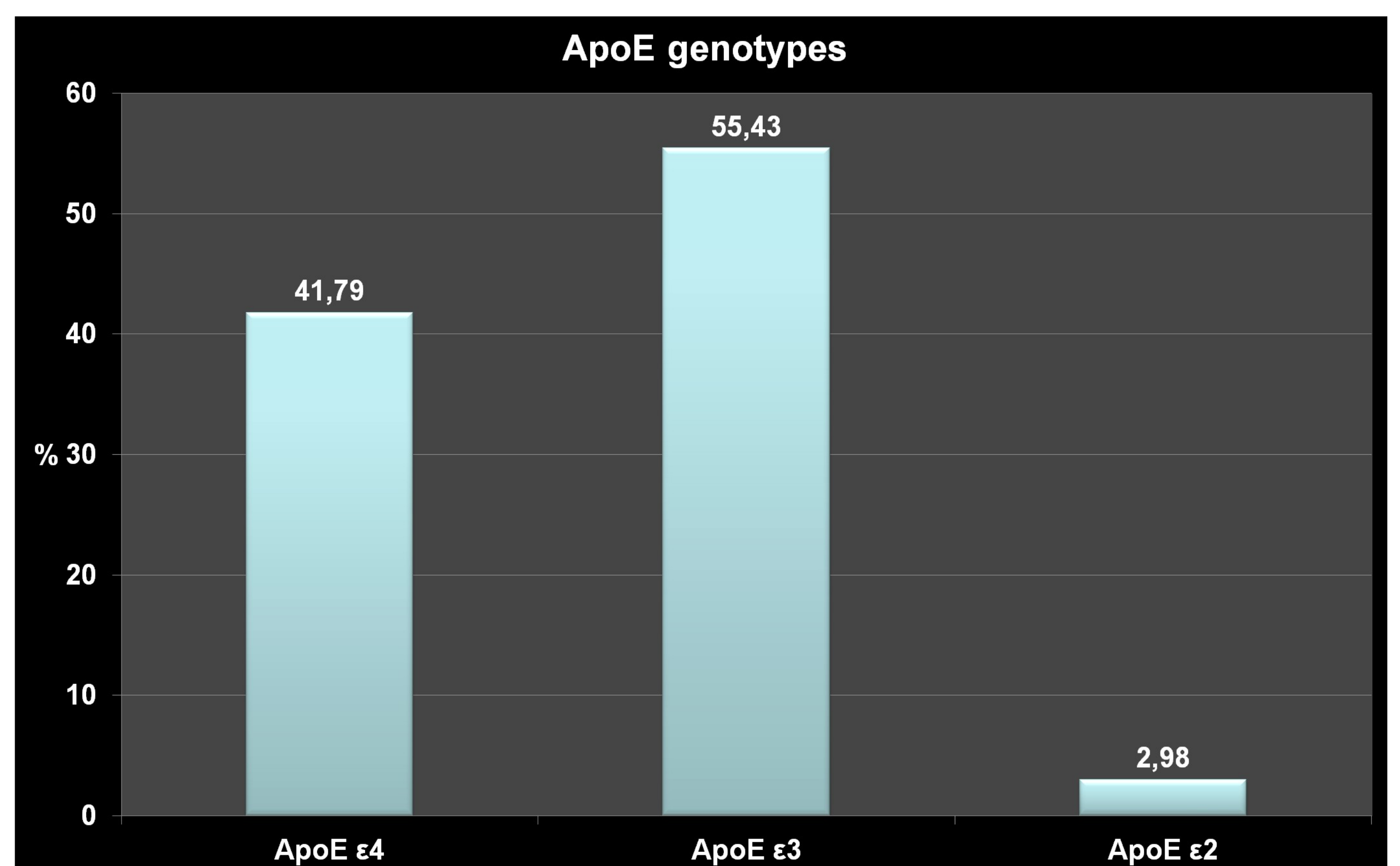
Results: 368 patients (198, 53.80% female; 170, 46.19% male) entered the study. Mean age was 75.6 years (range 54-89 years). The APOE ϵ 4 allele was found in 153 (41.79%) patients; the APOE ϵ 3 allele in 204 (55.43%) patients; the APOE ϵ 2 allele in 11 (2.98%) patients. Among APOE ϵ 4 group, 87 (56.86%) patients showed BPSD. These symptoms were also found in 34 (16.66%) APOE ϵ 3 carriers and in 1 (9.09%) APOE ϵ 2 carrier. Frequency of BPSD resulted higher among APOE ϵ 4 carriers ($p=0.021$). Patients heterozygote or homozygote for APOE ϵ 4 were 70 and 83 respectively. Among the APOE ϵ 4/ ϵ 4 carriers, 51 (58.62%) showed BPSD while in the APOE ϵ 3/ ϵ 4 carriers 36 (41.37%) patients showed these symptoms. Frequency of BPSD resulted higher among patients homozygote for APOE ϵ 4 ($p=0.023$).

Discussion: In agreement with data of previous study these results showed that APOE ϵ 4 carrier status seems to be associated with a major occurrence of BPSD, (particularly APOE ϵ 4 homozygosity).

Conclusions: These results suggest a strong association between APOE ϵ 4 genotype and BPSD. To better clarify this link further studies, with adjustment for potential confounding factors, are needed.

Baseline characteristics of the patient population (n=368)

MALES (n, %)	170 (46.19%)
FEMALES (n, %)	198 (53.80%)
MEAN AGE (yr \pm SD)	75.6 \pm 8.1
MEAN EDUCATION (yr \pm SD)	5.6 \pm 2.9
MEAN AD DURATION (yr \pm SD)	5.4 \pm 1.2
MMSE (total mean score \pm SD)	18.2 \pm 2.8
HIS (total mean score \pm SD)	3.6 \pm 2.4
GDS (total mean score \pm SD)	4.7 \pm 0.5
CDR (total mean score \pm SD)	1.3 \pm 1.5



References

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