

5-HTTLPR polymorphism and delusions in Alzheimer's disease

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Introduzione

Mechanisms underlying delusions in Alzheimer's disease (AD) patients have not been fully clarified [1]. The 5-hydroxytryptamin gene-linked polymorphic region (5-HTTLPR) is a variable number of tandem repeat in the promoter region of serotonin transporter encoding gene SLC6A4 with two major alleles long (L) and short (S) affecting gene expression [2,3]. Aim of this study was to determine whether the 5-HTTLPR is associated with delusions in patients with AD.

Metodi

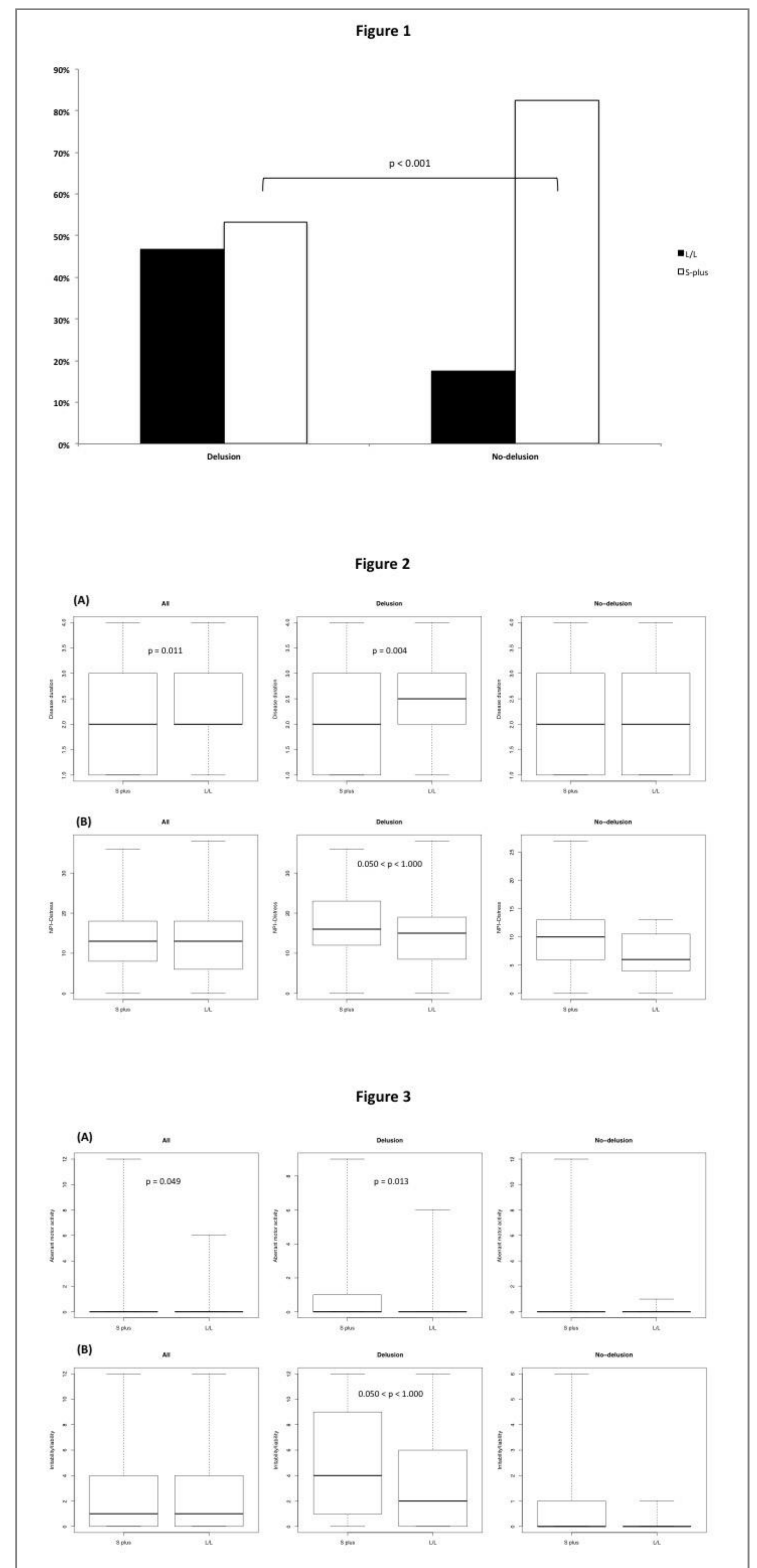
A total of 257 consecutive AD patients were included in the study. Of these, 171 AD patients with delusions (AD-D) and 86 AD patients without delusions (AD-NoD). Cross-sectional study. Analysis of the 5-HTTLPR in blinded fashion. Assessment of the Comprehensive Geriatric Assessment (CGA), Mini-Mental State Examination (MMSE), and Neuropsychiatric Inventory (NPI).

Risultati

At five years of follow-up delusion symptom was observed in 171 patients (66.54%). In respect to AD w/o delusion, AD with delusion a low prevalence of S-plus carriers (5-HTTLPR-L/S+5-HTTLPR-S/S genotypes) ($p < 0.001$; OR=0.241, 95%CI 0.118-0.466) (Fig. 1). Logistic regression analysis adjusted for the apolipoprotein E polymorphism showed that in AD with delusion 5-HTTLPR may affect disease duration ($p = 0.004$; OR=0.804, 95%CI 0.862-0.980) (Fig. 2) and, among neuropsychiatric symptoms aberrant motor activity ($p = 0.013$; OR=1.046, 95%CI 1.009 - 1.083) (Fig. 3).

Conclusioni

This study showed that 5HTTLPR polymorphism is associated with delusions in AD, suggesting a possible involvement of the serotonergic system in the onset of delusion in AD. If confirmed on wide samples of highly-selected AD patients, our data suggested that 5-HTTLPR genotyping may be useful to identify subgroups of AD patients with delusion to address towards different treatment.



Bibliografia

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