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Neuropsychological association between paranoid schizophrenia and delusional misidentification syndromes: an in between subjects design

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Background

Delusional Misidentification Syndromes (DMSs) have been observed in a variety of psychiatric and other medical conditions but they seem to be strongly associated with schizophrenia since they occur predominantly in the context of paranoid schizophrenia. Previous studies about a neuropsychological relationship between DMSs and schizophrenia have implicated cognitive functions performed by bilateral frontal and right hemisphere in both schizophrenia and DMS, but there are mainly case reports, lacking the appropriate controls. Aim of the present study was to investigate whether DMS in paranoid schizophrenia is mediated by a distinct neuropsychological substrate indicative of differential bilateral frontal and right hemisphere dysfunction.

Materials and methods

The sample of the study included 44 right-handed schizophrenic patients, 22 of them with DMSs and 22 without previous history of DMSs, matched for gender, age, education, severity and duration of illness. Both groups were on medication with comparable doses of atypical antipsychotics. The neuropsychological battery used was designed to assess cognitive functions mainly associated with right hemisphere and frontal lobe areas. DMSs were

active and their counterparts were also deluded at the time of neuropsychological assessment.

Results

No statistically significant differences were found between the two groups in terms of their mean performance in all neuropsychological tests. Both groups showed evidence of dysfunction in frontal and right cerebral regions.

Conclusions

Our findings show evidence of right hemisphere and frontal lobe dysfunction of equal severity in both groups of paranoid schizophrenic patients with and without DMS and suggest that DMS and paranoid schizophrenia share the same neuropsychological substrate.

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