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Do schizophrenics suffer from right hemi-neglect?

Patients with schizophrenia, a chronic and heterogeneous psychiatric illness, may demonstrate some lateralized functional and structural anomalies. In the literature, several imaging studies have reported anomalies that predominate in the left hemisphere. Furthermore, neuropsychological studies reported anomalies towards the right hemi- space. Thus, some authors have suggested a possible right hemi- neglect syndrome in schizophrenia. However, controversy still exists concerning these data, with some authors also demonstrating lateralized anomalies in the opposite direction (i.e., predominant in the right hemisphere or towards the left hemi-space), and this kind of anomaly was not always assessed. In order to better describe and understand visual-spatial lateralized anomalies in schizophrenia, the present work compared directly these anomalies via tasks normally used to assess the hemi-neglect neurological syndrome, a disorder in which patients "neglect" one side of space (more often the left side following right hemisphere lesions). Thus, lateralized visual-spatial anomalies in schizophrenia were studied using different tools mainly used to characterize neglect, including: the Behavioural Inattention Test (B.I.T.), the manual line bisection task, the landmark task (or visual line bisection), the line bisection with a local cueing paradigm, and the number bisection task. The first test, the B.I.T., was used to determine whether or not a clinical tool used to diagnose neglect would be capable of demonstrating visual-spatial anomalies in schizophrenia. The following tests, considered to be more sensitive, were used to examine and describe the main characteristics of the lateralized visual-spatial anomalies observed in schizophrenia. Results showed that: patients with schizophrenia can not be diagnosed as hemi-neglect patients (i.e., are not as impaired as neglect cerebral stroke patients); however, compared to healthy participants, they were impaired on some visual-spatial sub-tests of the B.I.T.; performances on the line bisection task showed a subtle right hemi- neglect in patients with schizophrenia; the other tools showed that, as is the case for neglect patients, this lateralized defect is not the results of a simple perceptual deficit, but is instead due to lateralized anomalies in attentional and representational functions or abilities. These results, although less dramatic and in the opposite direction, are similar to the characteristics usually observed in neglect patients. This data suggest that the similarities in the lateralized anomalies observed in schizophrenia and neglect patients implicate the left parietal cortex in schizophrenia.

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