[Striatal dopamine transporter density decrease in first episode schizophrenic patients treated with risperidone.]

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Extrapyramidal symptoms and Parkinsonism (PS) are side effects commonly observed with antipsychotic treatment. However, about 24 % of never-treated schizophrenic patients may suffer from PS, which contrast with that 1 % observed from the general population. 123I-FP-CIT SPECT has probe useful to differentiate degenerative from non-degenerative PS, so it could be interesting using it for establishing the functional state of presynaptic dopamine neurons of these patients. AIM. To determine the dopamine transporter binding (DAT) in a homogeneous group of first-episode schizophrenic patients. METHODS. An open, transversal study. Thirty schizophrenic in-patients and 15 healthy subjects were recruited. Patients were treated with similar doses of risperidone and all subjects were scanned with 123I-FP-CIT. Extrapyramidal symptoms and psychopathological status was assessed by Simpson–Angus, CGI and PANSS. Semi-quantitative analyses of SPECT images were performed using ROIs placed in caudate nucleus, anterior, medium and posterior putamen and occipital cortex. RESULTS. Whole striatum 123I-FP-CIT binding ratio was significantly lower in patients than healthy subjects (t = 2.56, p < 0.014). This was observed in whole putamen (t = 2.66, p < 0.011), anterior (t = 2.35, p < 0.023), medium (t = 2.38, p < 0.022) and posterior putamen (t = 2.09, p < 0.042). No differences were observed in caudate nucleus (t = 1.81, p = 0.076). Females obtained higher binding ratios than males (t = -3.13, p < 0.003).
No correlation was observed between 123I-FP-CIT binding ratios and clinical scales. CONCLUSION. In our series, first episode schizophrenic patients treated with risperidone have a decrease striatal DAT binding assessed with 123I-FP-CIT SPECT. This alteration could be related to the own schizophrenia disease or be secondary to the antipsychotic treatment.

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