

**Basal ganglia lesion due to diabetic striatopathy can result in a different threshold for drug induced movement disorders**

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*Background and objectives:* Diagnosis of Diabetic striatopathy (DS) is based on both clinical assessment and striatal hyperintensity on T1-weighted MRI [1]. Here we report two patients with acute DS who have developed early contralateral parkinsonism following treatment with dopamine-depletors.

*Results:* An 81-year-old male patient and a 71-year-old woman with type II diabetes mellitus in poor glycemic compensation were admitted to our department for the acute onset of left upper and lower limb choreic involuntary movements. The man began to complain of the insidious appearance of choreic left arm movements after 20 days from insulin withdrawal; in the second case no therapeutic switch had been made. On admission their Glycated Hemoglobin level was 76 and 105 mmol/mol (standard value 20-42), respectively. T1-weighted brain MRI showed area of altered signal in the right putaminal region in both patients [2]. [123I]-FP-CIT was performed in case 2 and showed a slight but non-significant reduction of the radiotracer uptake in the right putamen. Treatment with Haloperidol was started up to 2-3 mg/day [3] with a good response within a few weeks. After 2 months they both complained of clumsiness with the right upper limb and a tendency to crawl the homolateral foot on the ground. On neurological examination a right-sided marked bradykinesia with moderate rigidity was noted. Therapy with Haloperidol had been gradually reduced until suspended, with marked improvement of the hypokinetic disorder.

*Conclusions:* It's quite unusual for DS to happen during a therapeutic switch as in our first patient, infact there are no cases described in the literature. We could therefore hypothesize a different susceptibility of basal ganglia to the effect of dopamine-depletors: a structural damage of the striatal pathway could result in higher threshold, making drug effective against the hyperkinetic disorder. Iatrogenic parkinsonism relative risk is usually related to the duration of treatment with neuroleptic drugs [4]; in our patients instead, a lower threshold in the healthy basal ganglia side caused the early appearance of parkinsonism.

**References:**

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