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treatment and plasmapheresis are effective in preserving sensory nerve potentials and motor function.

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Contraversive visual tilt illusion associated with a cerebellar infarction

Visual tilt illusion consists of an abnormal perception of the environment, which seems to be rotated at a variable angle without any change in the spatial relations of other objects. It is sometimes associated with other postural and ocular tilt effects. It can be secondary to disturbances in the peripheral or central vestibular pathways.1 Previous reports suggest that cerebellar injuries could also cause it;2 this has not been documented before. We report a case of visual tilt illusion probably associated with an isolated cerebellar lesion, studied with CT and MRI.

A 56-year-old man with hypertension and hypercholesterolaemia had a sudden attack of vertigo and visual discomfort, with other changes of the unaffected eyes. It is sometimes associated with other postural and ocular tilt effects. It can be secondary to disturbances in the peripheral or central vestibular pathways.1 Previous reports suggest that cerebellar injuries could also cause it;2 this has not been documented before. We report a case of visual tilt illusion probably associated with an isolated cerebellar lesion, studied with CT and MRI.

The present report confirms a previously hypothesised role for the cerebellar structures in the control of perception of verticality, and may contribute to a better knowledge of the pathophysiology and the topographic diagnosis of the central vestibular syndromes.

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Low striatal D2 receptor binding as assessed by [3H]IBZM SPECT in patients with writer's cramp

Letter's cramp is a form of idiopathic focal task specific dystonia. In accord with other studies on idiopathic and symptomatic dystonia, Tempel and Perlmutter suggested the presence of an abnormal striatohemispheric and globus pallidus system. In view of the
The availability of striatal D2 receptors in dystonia may be possible involvement of dopaminergic striatal receptors in dystonia, we measured the availability of striatal D2 receptors in patients with writer’s cramp using \[^{123}I\]IBZM SPECT.

Ten consecutive right-handed patients (eight male and two female) were classified into four (15-17) age groups. Six of these patients had dystonic writer’s cramp depending on whether or not the symptoms appeared only during writing. None of the patients had been treated with neuroleptic, dopaminergic, or anticholinergic drugs or botulinum toxin. Hypokinesia, rigidity, postural tremor, resting tremor, and dystonia were present in all patients. Bradykinesia of the hands was assessed with a pegboard test, measuring the time (s) required to invert eight pegs. Pegboard performance of patients was compared with that of 46 age-matched controls. Results from \[^{123}I\]IBZM SPECT were compared with 12 other age-matched controls from an earlier study.1

A brain dedicated SPECT system, the Strichman Medical Equipment 810X, was used. Two hours after intravenous injection of approximately 185 MBq \[^{123}I\]IBZM (Cycgy BV, Technical University, Eindhoven), tomographic SPECT studies were performed. A maximum of 12 slices was made, starting at the orbito-meatal line and proceeding parallel to it (300 ulica; intermediate distance 6 mm). For analysis of specific striatal \[^{123}I\]IBZM binding, two slices with the highest striatal activity were summed and a template with fixed regions of interest for the striatum and occipital cortex was placed bilaterally on the summed image.2 The ratio of the striatal binding to the occipital binding quantifies specific binding.

The mean ages (table) did not differ among the three groups (t tests). Left and right \[^{123}I\]IBZM striatal : occipital ratios were significantly lower in patients than in controls (t tests). There was no correlation between severity of dystonia and \[^{123}I\]IBZM binding. We did not find a correlation between \[^{123}I\]IBZM ratios and duration of disease or age. This probably means that the decline in striatal D2 receptors is not linearly progressive but remains stable over many years, which accords with our clinical impression. However, because the preclinical \[^{123}I\]IBZM ratios of the individual patients were not known, it is hazardous to assess rates of decline in a small cross sectional sample.

The results raise some questions. Firstly, there was a bilateral reduction of available striatal D2 receptors, whereas the symptoms were unilateral and there was no asymmetry between the hemispheres. Bilateral abnor-
malities in \[^{123}I\]IBZM binding have also been found by others.3 This bilaterality probably only means that the abnormalities found are related to particular motor dysfunctions which pass undetected if not properly challenged, as shown by the fact that many patients develop writer’s cramp on the left side, if they change to writing with the left hand. Accordingly, it is also not uncommon to find involvement of the left, or fingering hand, in musicians playing keyboards, guitars, or other stringed instruments.

A second question is why the reduced availability of D2 receptors in striatal cholinergic interneurons resulting from disinhibition observed in dystonia, have, however, been explained by loss of D2 receptors on cholinergic interneurons.

Due to D2 receptor loss—fits the suggestion of the possible involvement of dopaminergic striatal receptors in dystonia, we measured the availability of striatal D2 receptors in patients with writer’s cramp using \[^{123}I\]IBZM SPECT.

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