a factor predisposing to the syndrome. Residual neurological sequelae have been described in some patients with NMS, mostly signs of Parkinsonism or decrease of general intellectual faculties. Our patient who had a long and severe course in relation to the syndrome was left with a hypertonia (mainly of the left hand) and dysarthria, though we cannot tell whether they are due to his Wilson's disease or to the NMS.

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Acute dystonic reaction with asterixis and myoclonus following metoclopramide therapy

Sir: Extrapyramidal side effects are well recognised following medication with metoclopramide, a selective D2 dopamine antagonist. Some 95% of these effects are of the acute dystonic-dyskinetic type. They occur mostly in younger females, within 72 hours of taking the drug, and disappear without specific treatment. Oculogyric crises, torticollis, opisthotonos, and orofacial dyskinesias are often present. However, the occurrence of asterixis and myoclonus together with acute dystonic reactions has not been reported. We observed such a patient.

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A 65 year old previously healthy farmer was brought to the emergency room 18 hours after the acute onset of symptoms. There was no family history of movement disorders, or of neuroleptic-induced extrapyramidal reactions. Four days before admission, he experienced mild epigastric distress and abdominal fullness, for which 2 days later, he took one tablet, 5 mg of oral metoclopamid, dextromethorphan, and Gasgel (simethicone, aluminum magnesium hydrate and magnesium oxide). Some 30 hours after the first dose, and 2 hours after the second dose, he developed irregular, intermittent muscle jerking, most obviously in the face, mouth, and limbs (fig. a). The jerks could be initiated when the patient began to speak or to move a limb, but were not affected by external stimuli such as pinch, touch, vibration, light, or sound. The jerks disturbed speech and swallowing. There was no change in the level of consciousness. Obvious irregular independent flapping tremors were observed in both outstretched hands when the wrists and fingers were extended (fig. b). There was involuntary hyperextension of the neck and forceful opening of the mouth. Routine laboratory studies were all normal including liver function tests. A chest radiograph was normal. EEG (awake) revealed no abnormality. The asterixis, myoclonus, and acute dystonic reactions cleared within 12 hours. On follow-up 6 months later the patient was normal.

Myoclonus has been described in association with the acute hyperkinetic syndrome in neuroleptic agents. It has not been recorded in the extrapyramidal side effects of metoclopramide. Asterixis, the postural sign in diffuse encephalopathies in various metabolic disorders as well as a rare manifestation of focal lesions in the parietal lobe, thalamus, midbrain and pons. Asterixis and myoclonus were the dominant features in our patient with a relatively mild acute dystonic reaction. Both sets of manifestations disappeared at about the same time. Neuroleptic-induced acute dystonic reactions may be due to enhanced dopamine release on supersensitive postsynaptic receptors. Whether the asterixis and myoclonus can also be attributed to a similar (hypothesised) transient increase of dopamine acting on postsynaptic receptors, is an open question.

Both myoclonus (using stronger stimulation) and asterixis can be produced by electrical stimulation of the human motor cortex through the intact scalp. The possibility of a metoclopramide-induced encephalopathy responsible for both the acute manifestations of asterixis as well as myoclonus might be considered in our particular patient.

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Bilateral spontaneous carotid-cavernous fistulas, associated with systemic hypertension and generalised arteriosclerosis: a case report

Sir: Spontaneous carotico-cavernous fistulas have been repeatedly reported as a result of improved angiographic technique and better clinical recognition. They are usually indirect. Of the 21 cases with spontaneous carotico-cavernous fistulas observed by Nukui et al only one was direct; all 20 cases of direct fistulas reported by Peeters and Kröger and Peeters, and all, but one, of the 54 cases reported by Debrun et al had a history of trauma; thus direct spontaneous fistulas are very rare. Even rarer is the occurrence of bilateral direct fistulas whether spontaneous or traumatic. With the exception of one patient in the 54 patients series reported by Debrun et al, all the direct fistulas reported above were unilateral.

We report a patient with bilateral direct spontaneous carotid-cavernous fistulas associated with hypertension and intracranial arteriosclerosis.

A 70 year old woman noticed one morning, on waking up, a swelling of the right eye lid and redness of the right eye, accompanied by a pulsating whizzing noise all over the head. She also experienced transient diplopia on looking to the right with horizontally shifted images, and a clumsy feeling of the left arm. Her complaints were not preceded by episodes of headache or fever. There was no history of head injury. Acuity of her vision was not altered; she had had poor vision of the left eye ever since the delivery of a child more than 30 years previously. Apart from systemic hypertension which was well controlled on beta-blockers and diuretics she had no other major illnesses. During the next 2 months, her clinical symptoms steadily improved; the whizzing noise got less, the eye lids were less swollen and diplopia diminished. Because of her symptoms she consulted an ophthalmologist who referred her to the neurology
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