

## LETTERS TO THE EDITOR

### Harlequin syndrome due to superior mediastinal neurinoma

The harlequin syndrome was first described by Lance *et al.*<sup>1</sup> Five patients are presented with sudden onset of unilateral facial flushing and sweating in hot weather or when exercising vigorously. In one patient the site of the lesion was almost certainly brainstem but for the other four cases evidence supports a contralateral peripheral lesion, affecting the sympathetic outflow through the third thoracic root. CT and MRI of the thoracic area failed to disclose a structural lesion in the four patients. The report of this syndrome is still rare. We describe a patient with a left superior mediastinal neurinoma who developed facial flushing and sweating on the right side.

A girl aged 17 years came to our clinic in 1976, because of unilateral facial flushing after exertion. She first noticed asymmetrical flushing at the age of 15 when jogging or walking in hot weather. The right half of her face was flushed and sweated after 10 minutes of jogging while the left half remained pale and dry. Sweating over the trunk and limbs was symmetrical. The same phenomenon also developed on taking a hot bath. On examination, the left pupil was slightly smaller than the right but there was no ptosis and the pupils reacted normally. The nervous system and other systems were otherwise normal. Plain radiographs confirmed a mass in the left superior mediastinum at the level of the third thoracic vertebra.

The tumour was a neurinoma which was totally resected. It was approximately 4 × 4 × 3 cm. The tumour was located at the level of the third thoracic vertebra in the left superior mediastinum. After operation left ptosis developed. Her facial flushing and sweating when exercising have persisted on a 12 year follow up.

This patient showed harlequin syndrome associated with superior mediastinal neurinoma. Although her signs and symptoms did not improve after operation, we could not attribute the syndrome to any other cause except for the tumour. Our case supports the hypothesis by Lance *et al.*<sup>1</sup> that this syndrome results from a deficit of the contralateral third thoracic nerve. No structural lesion was disclosed in their four patients but this report illustrates the need for thorough investigation of harlequin syndrome.

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1 Lance JW, Orummond PD, Gandevia SC, Morris JGL. Harlequin syndrome: the sudden onset of unilateral flushing and sweating. *J Neurol Neurosurg Psychiatry* 1988;51:635-42.

### Migraine coma

It is rare for attacks of migraine to be complicated by generalised, as opposed to focal,

cerebral dysfunction, but when an acute self-limiting encephalopathy recurs, a diagnosis of migraine coma should be considered especially if there is a history of classic or familial hemiplegic migraine.

Our patient, a black Barbadian, was born in 1976. In 1980, he began to suffer from intermittent headaches with vomiting, sometimes associated with drowsiness. During the following two years, he was admitted to hospital on two occasions both following a prolonged episode of clouding of consciousness preceded by severe headache and vomiting. Examination revealed extensor plantar responses and brisk reflexes, and on each occasion a diagnosis of encephalitis was considered. He was pyrexial, maximum 38 °C, during the first 48 hours of the second admission and CSF examination was normal. He made a full recovery and was discharged home on the sixth hospital day on both occasions. Neurological examination was normal.

During the next three years, he continued to have intermittent headaches, mainly right-sided, associated with visual disturbance to the right and vomiting. A diagnosis of classic migraine was made.

In 1984, a generalised headache culminated in another hospital admission with profound stupor, mild pyrexia and extensor plantar responses. Again, there was full recovery within one week.

In November 1988, he was involved in a brawl at school during which he sustained a blow to the head. Initially, he complained of a headache, but after about two hours his speech became slurred and he was rushed to hospital. He rapidly became confused, with several episodes of screaming and thrashing of all his limbs followed by longer periods of drowsiness. This sort of disturbed behaviour persisted for three days. His temperature rose to 38 °C within 36 hours and fell to normal by 72 hours. At the peak of this illness, he was unresponsive to painful stimuli and showed generalised hyperreflexia with extensor plantar responses. CT brain scan was normal. EEG showed diffuse slowing (0.75-1.5 Hz) compatible with a severe encephalopathy but no epileptiform activity was seen. CSF analysis was normal. He improved gradually after 72 hours, initially complaining of a headache, but after seven days neurological examination had returned to normal and his confusion disappeared.

In summary, between the ages of four and 12 years, this patient with a clear history of classic migraine had four hospital admissions for a self-limiting encephalopathy with normal CSF findings and transient pyrexia. There was no evidence of decline in intellectual capacity as a result of the encephalopathic attacks.

A detailed family history could not be obtained. We believe these recurrent encephalopathic episodes were due to migraine as described by Fitzsimmons and Wolfenden.<sup>1</sup>

Interestingly, our patient's most recent episode appeared to be precipitated by a mild head injury, a characteristic clinical feature in previous reports of coma episodes associated with migraine.<sup>1</sup> CSF findings have been variable with many authors reporting pleocytosis; however, this may be a late feature occurring several days after acute admission<sup>1</sup> and may explain the normal CSF findings in this patient.

Reports of migraine coma are rare but it is important to recognise the condition in the differential diagnosis of stupor with a normal CT scan, since the prognosis is excellent and

full supportive measures, including mechanical ventilation<sup>2</sup> may be required.

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1 Fitzsimmons RB, Wolfenden WH. Migraine Coma: meningitic migraine with cerebral oedema associated with a new form of autosomal dominant cerebellar ataxia. *Brain* 1985;108:555-7.

2 Nelgan P, Harriman DGF, Pearce J. Respiratory arrest in familial hemiplegic migraine: a clinical and neuro-pathological study. *BMJ* 1977;2:732-4.

### Lamellated sensory corpuscles within the endoneurium

A wide diversity of morphological types of corpuscular nerve ending has been reported among different animal species.<sup>1</sup> We report the unusual finding of an aggregate of lamellated sensory corpuscles within the endoneurium of a sural nerve taken for biopsy (at the level of the lateral malleolus) from a woman aged 77 years.

Transverse ultrathin sections revealed an area within one fascicle which contained a group of densely staining axons lying beneath the perineurium (fig 1). Each axon was surrounded by up to six thin flattened cytoplasmic lamellae, some of which could be traced into the perinuclear region of specialised Schwann cells (also called lamellar cells) from which they were derived.<sup>2</sup> The cytoplasm of the lamellar cells was pale and contained few organelles other than intermediate filaments and occasional mitochondria; it was, however, rich in caveolae and pinocytotic vesicles. Each layer was invested by basal lamina, and separated from its neighbour by bundles of collagen fibrils.

The axons were elliptical in outline, and some exhibited stubby sidearms which extended between the lamellar cells (fig 2). There were differences in the arrangement of axo-

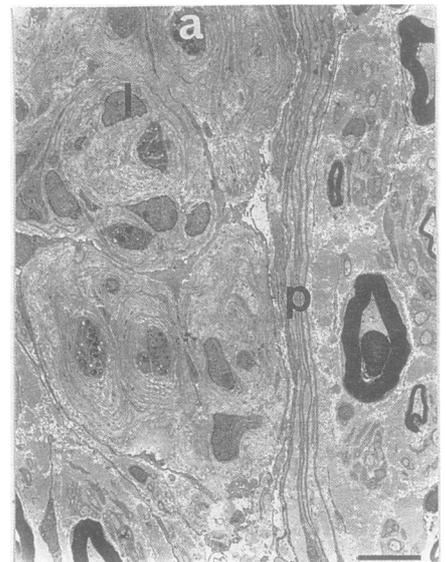


Figure 1 Transverse section through aggregate of corpuscles. p: perineurium; a: axon; l: lamellar cell. Scale bar 20 µm.