She was thought to have Parkinson's disease but when she became rapidly unconscious (3 days after the above examination) CT scan (fig) revealed a large left hemisphere intrinsic tumour with contra-lateral hydrocephalus. The patient continued her rapid deterioration and died. Unfortunately a post-mortem examination was not obtained.

Our patient's Parkinsonian features were more prominent in her arms, suggesting that hydrocephalus was not the mechanism responsible for the Parkinsonism and that direct infiltration of tumour into the contra-lateral basal ganglia may have contributed. This case illustrates that unlike Navarro *et al*'s patient, tell-tale symptoms or signs of cerebral tumour are not always present in a patient with Parkinsonism secondary to intrinsic brain tumour.

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Reference

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Double-blind controlled trial of azathioprine in the treatment of multiple sclerosis

Sir: In 1983 the Medical Research Council Working Party on Trials of Immunological Treatment in Multiple Sclerosis concluded that existing trials¹⁻³ did not determine whether azathioprine is effective in the treatment of multiple sclerosis. Consequently we embarked on a double-blind controlled multicentre trial of treatment with azathioprine lasting for three years. Between April 1983 and October 1984, 354 patients were randomly allocated to azathioprine or placebo treatment groups. The results are being reviewed periodically by an impartial audit committee because if an overwhelmingly significant effect were observed during the course of the trial we would have an ethical obligation to stop. The major outcome criteria which the drug would have to fulfil to establish its effectiveness would be differences between the two groups in change in Kurtzke disability status score⁴ or ambulation index.⁵ We would also be interested in changes in individual items of the

Kurtzke functional scale score, particularly visual function which is almost entirely independent of the ambulation index and only a minor component (compared with pyramidal function) of the Kurtzke disability status scale.

The large number of patients in the trial and the small standard deviation of change in Kurtzke disability status after two years ($n = 230$, mean = 0.29, standard deviation = 0.73) will permit some analysis of subgroups. There are many possible hypotheses which could be tested, many of which will be significant by chance alone. Consequently before data entry is complete and any subgroup analyses are performed we wish to publish the hypotheses which we will be testing. At entry patients were classified according to set criteria as:

- (1) *clinically definit* having at least two episodes and two clinical lesions or two episodes and one clinical and one subclinical lesion,
- (2) *laboratory supported definit* having at least two episodes, one clinical lesion and oligoclonal bands or IgG increase in the CSF and
- (3) *currently progressive* having two necessarily separate lesions (of which one might be subclinical) and oligoclonal bands or IgG increase in the CSF.

Groups 1 and 2 will be analysed together and group 3 separately. The subgroup of group 3 who have had a progressive course from onset will be analysed separately from those who developed a progressive course after initial relapses and remissions. Patients treated early in their disease (within 2 or 5 years of onset) will be analysed separately from those treated later. Patients with relatively mild disease at entry into the trial (Kurtzke disability status scale score less than 5) will be analysed separately from those with more severe disease (scores 5-6). Of particular interest will be whether azathioprine is effective in those patients who have a malignant disease course in whom scores of 5-6 have been achieved within five years from onset. Other aspects which merit investigation are possible differences in responsiveness between males and females and younger and older patients. We will also evaluate whether the effectiveness of treatment is related to HLA status, in particular to the presence or absence of DR2 antigen. The frequency of relapses will also be compared but we consider this analysis less important. We intend to make the results available as soon as possible after collection of the last data in October 1987.

The British and Dutch
Multiple Sclerosis Azathioprine Trial Group

The participating centres are the neurology departments in the following hospitals: Aberdeen Royal Infirmary; Queen Elizabeth Hospital, Birmingham; Newmarket General Hospital; University Hospital of Wales; Walsgrave Hospital, Coventry; Dundee Royal Infirmary; Royal East Sussex Hospital, Hastings; Ipswich Hospital; Walton Hospital, Liverpool; Pembury Hospital, Pembury; West Hill Hospital, Dartford; The Radcliffe Infirmary, Oxford; Southampton General Hospital; Pinderfields General Hospital, Wakefield; Addenbrooke's Hospital, Cambridge; Brook General Hospital, Guy's Hospital, National Hospital for Nervous Diseases, London; Manchester Royal Infirmary; Royal Victoria Infirmary, Newcastle upon Tyne; Norfolk & Norwich Hospital; Academisch Ziekenhuis, Groningen, The Netherlands.

A list of participants can be obtained from the British and Dutch Multiple Sclerosis Azathioprine Trial Office, Department of Neurology, Guy's Hospital, London SE1 9RT, UK.

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Computed tomographic findings of brain and skull in myotonic dystrophy

Sir: We read with interest the paper by Avrahami *et al*¹ about computed tomographic findings in myotonic dystrophy. Brain atrophy has been described in these patients; however, cerebellar atrophy associated to this disorder has not yet been described.

We have recently seen a patient aged 54 yr with a family history of myotonic dystrophy

Figure Cerebellar atrophy, mainly of the folia with 4th ventricle dilatation.

who had a broad based gait since she was 45 with pronounced bilateral dysmetria on finger-nose test. On CT (fig) we found marked cerebellar atrophy, mainly of the folia, with fourth ventricle enlargement. All her six sons and daughters who had myotonia, diagnosed on clinical and electromyographic grounds, had no cerebellar signs and two of them had normal CT scans. Heredoataxia and other causes of cerebellar atrophy, such as drugs, alcohol and neoplastic disease were excluded.² The exact meaning of these findings is unknown.

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References

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Aphemia as a first symptom of multiple sclerosis

Sir: I must take exception to the diagnosis of multiple sclerosis given the patient described

by Herderschee *et al* in the *J Neurol Neurosurg Psychiatry*.¹

The history and findings do not fulfill the Poser *et al* criteria for laboratory supported definite multiple sclerosis for the important reason that dissemination in time, as well as dissemination in space, is not present. All the parameters cited in support of the diagnosis of multiple sclerosis, that is the CSF findings, the CT and MR images and, of course, the resolution of symptoms are all compatible with acute disseminated encephalomyelitis, a diagnosis which on the basis of the information provided seems considerably more likely.

This is, unfortunately, a common and distressing problem in differential diagnosis, compounded by the still not widely known fact that all the ancillary supporting data, viz the elevated CSF IgG, the presence of oligoclonal bands in the CSF, periventricular areas of attenuation with or without contrast enhancement, and areas of increased signal intensity by MR, can be seen equally in acute disseminated encephalomyelitis as in multiple sclerosis.

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Reference

- 1 Herderschee D, Stam J, Derix MMA. Aphemia as a first symptom of multiple sclerosis. *J Neurol Neurosurg Psychiatry* 1987;50:499.

Herderschee *et al* reply:

The criticism by Dr Poser of the diagnosis of multiple sclerosis in our patient is based upon his denial of the presence of dissemination in time and in space. The emergence of new lesions has, admittedly, not been demonstrated because no MR scan was made in the early stage of the disease.

The following facts, however, are against the alternative diagnosis of acute disseminated encephalomyelitis: (1) there was no history of antecedent infection or vaccination;¹ (2) systemic symptoms (fever, headache, nausea) which are included in all descriptions of acute disseminated encephalomyelitis, were absent.² Our patient was in an excellent general condition; (3) the EEG was entirely normal;³ (4) the CT scan in acute disseminated encephalomyelitis may be normal, but if abnormal it usually shows extensive and multiple cortical enhancing lesions or subcortical non enhancing lesions, or both.⁴

Ancillary investigations may not distinguish between a first attack of multiple sclerosis and acute disseminated encephalomyelitis, but clinical data and circumstantial evidence do. Considering the clinical presentation and results of ancillary investigations the diagnosis of acute disseminated encephalomyelitis is improbable. In our opinion multiple sclerosis is the most likely diagnosis.

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Palatal myoclonus influenced by neck posture

Sir: We read with great interest the communication on palatal myoclonus influenced by head posture.¹ Jacobs *et al*² had previously reported two cases of palatal myoclonus, one of which varied with neck posture and the other the myoclonus disappeared after two years. We report a patient with posture-related palatal myoclonus which remitted after three months.

A 52-year-old man presented with a three-month history of a clicking noise emanating from his throat, occurring only in certain neck postures. He had no problems with hearing or swallowing. On examining his throat with his neck flexed anteriorly and to the right, a clicking noise appeared associated with rhythmic contractions of the throat. The palatal myoclonus disappeared with his head in the midline position. It failed to appear in any other neck posture. His CT scan showed mild frontal atrophy. Three months later, his palatal myoclonus had remitted. Various manoeuvres including breath holding, squeezing the hands, curling the toes, moving joints and hyperventilation are known to exacerbate palatal myoclonus. However, reports of precipitation by certain head and neck movements are rare, our case being the third, and the first in which the myoclonus eventually disappeared. Palatal myoclonus is always associated with a disturbance of the Guillain Mollaret triangle, with subsequent olivary hypertrophy.³ The