LETTERS TO THE EDITOR

Sumatriptan and daily headache

Frequent use of ergotamine and simple analgesics is well recognised as a cause of chronic headache syndromes induced by drugs or drug withdrawal. Sumatriptan, a new and highly effective antimigraine drug, seemed not to produce this unpleasant side effect, as shown by long term studies.¹ Nevertheless, eight cases of sumatriptan misuse and daily chronic headache have been reported recently.^{2,3} Another 10 similar cases have been published in abstract form.⁴⁻⁶ The discrepancy between drug trials and clinical evidence may be due to the type of patients considered. In fact, eight of the 18 patients who used sumatriptan daily switched from misuse of analgesics or ergotamine to misuse of sumatriptan, 10 (nine of whom were migraineurs with a previous history of analgesic overuse) developed sumatriptan induced daily headache *de novo*. This kind of patient is not usually included in drug trials but is often found in clinical practice.

Sumatriptan has been reported to induce repeated recurrence of migraine attacks that respond to further doses of the drug.^{7,8} It may be possible that a similar mechanism occurs in drug induced migraine-like headache. In our opinion only one dose per week of sumatriptan should be prescribed to patients with either previous or current daily headache caused by drug misuse.

More reports of daily headache induced *de novo* by sumatriptan are needed to determine whether or not this new drug can transform migraine into chronic daily headache, as is already well documented for ergotamine and analgesics.

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Bilateral optic neuritis after hepatitis A

In adults bilateral optic neuritis is most commonly seen with demyelinating disease. An acute form exists in which both eyes are affected simultaneously. This acute simultaneous bilateral optic neuritis (ASBON) behaves differently from that associated with demyelinating disease and is characterised by a good visual prognosis and a low incidence of subsequent neurological disease.^{1,2} Here we describe a case of ASBON after hepatitis A infection.

A 22 year old female nurse presented in October 1992 with a three week history of malaise, lethargy, and abdominal pain, followed by the onset of jaundice. A full infectious screen detected hepatitis A specific IgM antibody only. One week later she developed pain around both eyes, which was exacerbated by movement. After a further week the visual acuity in her right eye deteriorated, followed two days later by her left eye. On presentation to the eye department, the visual acuity was 6/24 in the right eye and 6/18 in the left eye. There was a right relative afferent pupillary defect and colour vision was impaired in both eyes. Fundal examination showed bilateral but asymmetric optic disc swelling, with her right disc more swollen. Automated examination of the visual field showed diffuse field loss in both eyes. Apart from the presence of jaundice, general medical and neurological examination was normal.

Over the next three days the visual acuity fell to "no perception of light" and "perception of light" in the right and left eyes respectively. Head and orbit CTs showed no abnormality; MRI of the head did not show any white matter lesions and views of the optic nerves were normal. Visual evoked potentials showed prolonged latencies in both eyes, with averaged P2 latencies of 139 ms on the right and 121 ms on the left. Auditory and somatosensory potentials were normal. Lumbar puncture showed clear CSF, with an opening pressure of 10.5 cm H₂O. The CSF protein was 0.20 g/l, CSF IgG was 0.03 g/l, and there were no white cells or oligoclonal bands. Treatment with intravenous methylprednisolone and oral prednisolone was started.

Twelve days after the initiation of treatment the visual acuity had improved to "count fingers" and 6/5 in the right and left eyes. After one month the acuity had improved further to 6/18 and 6/5 respectively, and after four months to 6/12 and 6/5. One year after the onset of symptoms the patient had developed no further ocular or neurological symptoms. There was, however, temporal pallor of both optic discs and a persistent afferent pupillary defect.

ASBON occurs more often in children, and has been described after immunisation and after several viral and bacterial infections. Cases have been described in adults after fevers and also after chickenpox.^{2,3}

It is questionable, given the relatively good visual prognosis in adults with ASBON whether treatment with intravenous and oral steroids was indicated in this patient. Given the profound loss of vision, we thought that steroids were indicated to hasten visual recovery.⁴ Whereas the visual improvement began quickly, it continued for over six months after the cessation of treatment. A previous report of patients with unilateral optic neuritis has shown that even those with profound visual

loss initially may recover good vision, and this was the case here.⁵

In any case of adult bilateral optic neuritis the diagnosis of multiple sclerosis must be considered. Given the normal CSF examination, normal MRI, and the absence of further neurological symptoms after more than one year of follow up, we believe that multiple sclerosis is most unlikely but that hepatitis A was the causative factor.

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Eyelid opening apraxia in focal cortical degeneration

Tyrrell and associates recently described a novel neurodegenerative syndrome in which patients develop progressive restriction of speech output and orofacial apraxia.¹ All patients initially retained normal intellectual capacity. Positron emission tomography showed striking bifrontal hypometabolism, providing a functional neuroanatomical correlation with the clinical deficits. Despite considerable orofacial apraxia, the patients described by Tyrrell *et al*¹ apparently did not show abnormal ocular or eyelid movement.

We encountered a patient who had a virtually identical syndrome of progressive speech loss and orofacial dyspraxia. Whereas initial manifestations likely resulted from left frontal lobe dysfunction, she eventually developed pronounced lid opening apraxia, possibly reflecting progression of disease to homologous regions of non-dominant frontal cortex.

A 72 year old woman initially noted difficulty selecting and pronouncing words during telephone conversations in 1991. Her spouse noted that one of the earliest signs was a change in the way her mouth moved when they kissed. Despite a speech disturbance, the patient noted no dysphagia and recalled no other neurological symptoms. The problems gradually advanced to the point that she could only utter single, poorly pronounced words. Nevertheless, she understood spoken language and retained complete expressive communication through writing. Her memory also remained intact. By 1993, she noted difficulty initiating movement and her gait became slow and unsteady. No tremor or adventitious movements were ever witnessed. Within 12 months, the patient experienced difficulty

initiating and maintaining eyelid opening, resorting to separating her eyelids manually. At about the same time, she also developed urinary incontinence.

The patient's initial neurological evaluation showed dysphasia, generalised bradykinesia, and difficulty with voluntary eyelid movement. Psychometric assessment in July 1993 showed considerable impairment of language expression, with abnormal performance on the Boston naming and controlled oral word association tests. Reading and writing to dictation were intact. On a test of executive function (Wisconsin card sorting), she failed to generate correct categorisations and committed excessive perseverative errors. Although verbal memory could not be assessed because of language disturbance, she performed visual reproduction tasks (Wechsler memory scale) in the low normal range.

Neurological examination one year later disclosed a bradykinetic, essentially mute woman. Cranial nerve function was remarkable for bilateral ptosis; she could contract mimetic muscles voluntarily but lids would not remain raised even if displaced manually. Pupil size and reaction to light were normal. Gaze was conjugate but slightly restricted in upward pursuit. Moderate paratonic rigidity affected all limbs with a lesser degree of increased tone in axial muscles. No tremor was seen. Despite mutism, she retained the ability to communicate in writing, although she rarely produced more than single word responses. Comprehension was intact to two step commands. She was oriented to time and place, and recalled two of three objects after brief delay. Tests of buccofacial praxis (for example, protrude tongue) produced unrecognisable responses despite multiple attempts. Transitive and intransitive gestures of the extremities were also flawed although recognisable.

Pertinent radiographic studies included cranial MRI, which showed only moderate, diffuse cortical atrophy without lobar or brainstem atrophy. Fluorodeoxyglucose PET showed relatively decreased tracer uptake in medial and lateral precentral regions on both sides with sparing of the frontal poles.

The patient we encountered closely resembles those described by Tyrrell *et al.*¹ exhibiting initial disruption of speech output and pronounced orofacial dyspraxia associated with selective frontal lobe hypometabolism. Unlike the previous cases, however, our patient developed prominent apraxia of lid opening as well as ideomotor apraxia. Apraxia of eyelid opening characteristically occurs as part of extrapyramidal disorders such as Parkinson's disease, Huntington's chorea, progressive supranuclear palsy, and Shy-Drager syndrome.² In rare cases where lid opening apraxia followed focal brain injury, however, the responsible lesion affected the right hemisphere.³

On the basis of clinical and PET data, Tyrrell *et al.*¹ proposed that the syndrome of reduced speech output and facial dyspraxia reflects focal cortical degeneration of the inferior and lateral frontal lobe. The dominant frontal lobe contains cortical modules for both articulation and buccofacial praxis.⁴ Indeed, two of three patients described by Tyrrell *et al.*¹ showed asymmetric hypometabolism, worse in the left hemisphere. Accordingly, we speculate that our patient's initial symptoms reflect dominant hemisphere dysfunction, although dyspraxia of eyelid movement supervened

when homologous regions in the right hemisphere degenerated. The present finding extends the spectrum of the syndrome described by Tyrrell *et al.*¹ More importantly, if focal cortical degeneration originates in the non-dominant hemisphere,⁵ patients with this syndrome might present with predominant apraxia of eyelid opening. Clinicians confronted with eyelid apraxia must consider focal cortical degeneration in addition to extrapyramidal diseases, with which it more commonly develops.

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Unilateral hypotonic seizures successfully diagnosed by ictal SPECT with technetium-99m-HMPAO in a patient with a brain tumour

Among the simple partial seizures, motor seizures manifested by motor inhibition are rare¹ and often misdiagnosed as transient ischaemic attacks.² These ictal events are different from more common postictal Todd's hemiparesis. Single photon emission computed tomography (SPECT) is being widely used as an adjunctive technique in the localisation of epileptogenic foci. We present a case of a right frontal brain tumour associated with repeated transient left hemiparesis and stress the efficacy of utilising ictal SPECT for differentiating hypotonic seizure from transient ischaemic attacks.

A 52 year old man was admitted to our hospital after several episodes of acute transient left hemiparesis that each lasted for 20 to 30 minutes. There were no convulsive movements of the limbs, nor was there impairment of consciousness. Two years before this admission, a right frontal high grade astrocytoma had been totally removed (fig 1, A and B) and he had been followed up as an outpatient on sodium valproate, which kept him free of seizures. On the current admission, he showed no static neurological deficits, but MRI showed recurrence of the right frontal tumour (fig 1C). As transient ischaemic attacks were suspected after his reported episodes of transient hemiparesis, right carotid angiography was performed. A faint tumour stain was found in the late venous phase and the right frontal area appeared hypovascular, but no stenosis or occlusion of arteries was noted.

Although a repeat right frontal craniotomy and gross total removal of the recurrent astrocytoma was performed (fig 1D), the

Figure 1 Sagittal T1 weighted MRI with gadolinium before (A) and after (B) the initial operation and before (C) and after (D) the second operation. Homogeneously enhanced astrocytoma in the right frontal lobe (A) was totally removed at the first operation (B). Two years later, recurrence of the tumour was seen at the same position (C) and the tumour was successfully removed by surgery (D).

same type of transient left hemiparesis continued. Interictal EEG showed baseline slow waves in the right hemisphere but no episodic bursts of sharp or spike waves. To differentiate whether the transient hemiparesis was due to transient ischaemic attacks or epilepsy, interictal and ictal brain SPECT with technetium-99m-hexamethylpropylene amine oxime (^{99m}Tc-HMPAO) was performed.

Interictal SPECT showed hypoperfusion of the right frontal lobe where the recurrent astrocytoma had been removed (fig 2 left). Except for that area, there was no appreciable difference in signal between right and left hemisphere (fig 2 left). Ictal SPECT, however, showed an increased signal involving a wide area of the right hemisphere (fig 2 right), thus confirming the transient hemiparetic attacks as unilateral hypotonic seizures and not transient ischaemic attacks. The patient received carbamazepine as an additional anticonvulsant and no more seizures occurred.

In this patient, unilateral hypotonic seizures, which presented as transient ischaemic attacks, were clearly diagnosed by SPECT with ^{99m}Tc-HMPAO by documenting a change from interictal hypoactivity to ictal hyperactivity in the involved brain area.

Although postictal paralysis, usually called Todd's paralysis, is well recognised, unilateral hypotonic seizure is less commonly diagnosed, as it does not follow convulsive movements, whereas Todd's paralysis usually does. This seizure has been described as the "paralytic equivalent of genuine epilepsy", "negative seizures", "focal inhibitory seizures", and "ictal hemiparesis".^{2,3} Unilateral hypotonic seizures often resemble the clinical picture of transient ischaemic attacks and are often misdiagnosed. For the diagnosis of unilateral hypotonic seizures, an ictal EEG has been used and showed either episodic bursts of sharp waves with focal activity or focal bursts of slow activity with high amplitude.²

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Cavanagh replies:

Having read Wu's reply to my earlier criticism I still think that this case should not be regarded as anything more than "suspected triphenyltin intoxication". There are too many uncertainties for the conclusions to be anything firmer. One important uncertainty is the remarkably slow though sustained evolution of the signs of change in the nervous system. While ataxia and blurred vision were early events, it was two weeks before he slipped into semicomatose in November and he lay in coma virtually until the beginning of February. Signs of peripheral neuropathy developed two months after admission and persisted for several months more. The pattern of the neuropathy suggested an axonal mechanism whereas the electrophysiology gave evidence of myelin loss. Another uncertainty is the dose the subject absorbed, which is unknown, nor do we have any blood concentrations. Although it might seem from the reports that animal studies support the suggestion that triphenyltin can be neurotoxic, when such studies are unaccompanied by thorough morphological work interpretation is always very difficult and experience strongly suggests that these should be taken with the proverbial pinch of salt, especially when they have not been confirmed by others.

Triphenyltin compounds are widely used in the field and are generally considered to be free of serious neurological side effects, unlike trimethyl and triethyl compounds each of which produces its own pattern of affected cell types. On available evidence it is to be doubted whether there will be any future occasion when the claim of Wu and his colleagues will be supported, but should this happen I am content that this discussion and my initial reservations will be quoted.

J P CAVANAGH

NOTICES

Stanley Foundation Research Awards Program

Announcement of available research funds for research on schizophrenia and bipolar disorder

The Theodore and Vada Stanley Foundation, in collaboration with the National Alliance for the Mentally Ill, wel-

come applications for the 1996 Stanley Foundation Research Awards Program. The purpose of the awards is to support research directly related to the causes or treatment of schizophrenia and bipolar disorder.

The research awards are intended to attract established scientists from other areas of biology and medicine (for example, biochemistry, immunology, virology, and neurology) into research on schizophrenia and bipolar disorder as well as to provide support for innovative research by scientists already in the field whose funding sources are limited. Applicants are invited from all stages of career development.

Awards are for one or two years. They may be up to \$75 000 per year for studies involving human subjects and up to \$50 000 per year for other studies. Funds may be used for salaries, supplies, and equipment, but it is the policy of the Stanley Foundation not to pay indirect costs for administration of the award. In 1995, 49 applications were funded out of a total of 220 received.

Deadline for receipt of applications is 1 March 1996. The 4 page application consists of a brief outline of the proposed project, a budget, and a list of current and pending sources of funding. Notification of awards is made in June and funding to award recipients begins in August.

The research award applications are reviewed by a professional selection committee.

Requests for applications and questions should be directed to: Research Awards Coordinator, Stanley Foundation Research Awards Program, c/o NAMI, 200 North Glebe Road, Suite 1015, Arlington, VA 22203-3754, USA. Tel (703) 524-7600; fax (703) 524-9094

Sixth Meeting of the European Neurological Society June 8-12 1996 Netherlands Congress Centre, The Hague, The Netherlands.

Administrative Secretariat ENS 1996, c/o AKM Congress Service, PO Box, 4005 Basel, Switzerland, Tel ++41 61 691 51 11, Fax: ++41 691 81 89.

British Neurosurgery Research Group Meeting together with the North American Research Society of Neurological Surgeons Meeting, 1996.

This joint meeting will be held in Newcastle upon Tyne, 23-25 May 1996.

For further information contact: Professor A David Mendelow, Newcastle General Hospital, Westgate Road, Newcastle upon Tyne NE4 6BE, UK.

World Federation of Neurosurgical Societies Awards to young neurosurgeons.

The World Federation of Neurosurgical Societies will give five awards to young neurosurgeons for the best papers submitted for presentation at the XI International Congress of Neurological Surgery to be held in Amsterdam, Netherlands 6-11 July 1997. This will be open to all neurosurgeons born after 31 December 1961. Each award will consist of an honorarium of US \$1500, a certificate for the Congress. The papers will be judged by a committee and must contain

original, unpublished work on basic research or clinical studies related to neurosurgery.

Young neurosurgeons should submit eight copies of the manuscript (not more than 10 double spaced typewritten pages exclusive of figures and tables) to:

Albert L Rhoton, Jr, MD Chairman, WFNS Young Neurosurgeons' Committee, Department of Neurological Surgery, University of Florida Medical Center, PO Box 100265, 1600 SW Archer Road Gainesville, Florida 32610-0265, USA.

The submission should be accompanied by a supporting letter from the head of the candidate's neurosurgical department. The last date for submission is 1 October 1996.

Announcement from the British Neuropsychiatry Association: 1996 meetings

The 1996 Winter meeting—a joint meeting with The British Neuropsychological Society—will be held on Friday 19 January at the London Zoo. "Disorders of reasoning and perception" is the theme of the morning session and there will be presentation of short scientific papers and single case videos by members of both associations in the afternoon.

The 1996 Summer meeting will be held on 14-16 July at Robinson College, Cambridge. It will include topics on neurodevelopment, language, and the presentation of short scientific papers and single case videos by members. The Association's AGM will be held on 16 July.

For further details of these meetings please contact: Sue Garratt, Administrative Assistant, BNPA, 17 Clocktower Mews, London N1 7BB. Telephone/Fax: 0171 226 5949.

For details of membership of the BNPA, which is open to medical practitioners in psychiatry, neurology, and related clinical neurosciences, please contact: Dr Jonathan Bird, Secretary BNPA, Burden Neurological Hospital, Stoke Lane, Stapleton, Bristol, BS16 1QT. Telephone: 01179 701212 ext 2925/2929 or Sue Garratt at the address given above.

CORRECTIONS

Catarci T, Lenzi GL, Cerbo R, Fieschi C. Sumatriptan and daily headache. *J Neurol Neurosurg Psychiatry* 1995;58:508.

The reference to Osborne *et al* should be *BMJ* 1994;308:113.

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In table 2 (bottom line) the mean R2 index (range) in the third EMG subclass should be 31 (28-37).