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Delayed cerebellar ataxia: a new complication of falciparum malaria?

SIR,—Professor Nimal Senanayake's observation of cerebellar ataxia as a possible delayed complication of falciparum malaria has been made by others in Sri Lanka over the past few years.^{1,2} In these series, however, there was no parasitaemia during the cerebellar illness, and a documented attack (blood film positive for ring forms of the parasite) of falciparum malaria, which was successfully treated with chloroquine, preceded its onset. Cerebellar ataxia occurring during an attack of falciparum malaria has been reported previously.³

Ring forms of *Plasmodium falciparum* were seen in blood films from five of Professor Senanayake's 12 patients, and in four the parasite was resistant to initial treatment. This may suggest that the ataxia occurred during an attack of inadequately treated, resistant malaria and that his series had two subgroups of patients: those with and those without evidence of infection during ataxia. Therefore, the word delayed may not be relevant in all 12 cases.

All of the patients had visited or were resident in the northern, central, or eastern parts of Sri Lanka, which are endemic for malaria. Professor Senanayake has not, however, taken into account the epidemic of Japanese encephalitis that affected these areas during the period in which many of his patients would have presented. As this virus may

produce cerebellar ataxia^{4,5} I believe that it deserved more specific exclusion by serology, particularly as Professor Senanayake himself admits to the presumptive nature of the diagnosis of falciparum malaria in some of his patients.

Reports of ataxia associated with malaria seem to have originated solely from Sri Lanka. I wonder whether this phenomenon has been observed in the countries of South East Asia and Latin America where falciparum malaria is a major problem?

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- 1 De Silva HJ, Gamage R, Herath HKN, Abeysekera DTDJ, Peiris JB. A delayed onset cerebellar syndrome complicating falciparum malaria. *Ceylon Med J* 1986;31:147-50.
- 2 De Silva HJ, Gamage R, Herath HKN, Abeysekera DTDJ, Peiris JB. A self limiting midline cerebellar syndrome—is falciparum malaria the cause? *Trop Doct* (in press).
- 3 Illangasekera L, De Silva S. Acute cerebellar syndrome in falciparum malaria. *Ceylon Med J* 1976;22:130-2.
- 4 Simpson DIA. Flaviviruses. In: Weatherall DJ, Ledingham JGG, Warrel DA, eds. *Oxford textbook of medicine*. Vol 1. Oxford: Oxford University Press, 1984:101-5.
- 5 Johnson KM. Arthropod borne viral encephalitis. In: Beeson PB, McDermott W, Wyngaarden JB, eds. *Cecil—textbook of medicine*. Philadelphia: W B Saunders, 1979:283-92.

observations suggest that progressive deformity of Paget's disease might be prevented but do not help to determine whether a deformity may be reversed. Our preliminary observations in Paget's disease of the facial bones suggest that not only may progressive deformity be arrested but adequate modelling of bone may also occur with long term treatment.¹

Improvements in skeletal architecture are difficult to assess, but objective evidence for the efficacy of medical treatment is available for the neurological syndromes that may complicate Paget's disease. There is now considerable evidence to suggest that effective medical management may improve or halt the progression of some of these syndromes.⁷⁻⁹ Irrespective of the agent used, substantial clinical improvement occurs in most patients with spinal root and cord syndromes. In patients with slowly progressive lesions the response rate is comparable with that observed after laminectomy but without the hazards of surgical intervention.^{8,9} After medical treatment the duration of clinical improvement correlates remarkably with the degree of disease activity, as judged by biochemical estimates of bone turnover, and provides perhaps the most convincing evidence for the relation between clinical and biochemical indices of disease activity. Though these studies are uncontrolled, it is unlikely that improvements are the result of the natural history of the disorder as spontaneous recovery from cord compression due to Paget's disease has not been reported. Responses in bone pain, neurological syndromes, the formation of lamellar bone, radiographical improvements, and changes in skeletal shape suggest that the long term control of Paget's disease is likely to yield clinical dividends.

We have suggested that high doses (20 mg/kg/day) of disodium etidronate for one month were as effective as a six month course using recommended doses (5-10 mg/kg/day).¹⁰ We have confirmed these observations in a larger number of patients and shown the responses to be more consistent than with the low dose regimen.¹¹ Moreover, the duration of remission (62% relapse free at 12 months) was similar to that achieved with high or low doses of disodium etidronate used for six months and to that achieved with oral disodium clodronate. In this study it was particularly interesting that the more complete biochemical suppression was associated with more prolonged responses, irrespective of the regimen used or the pretreatment disease activity. Indeed, some of our patients remained in symptomatic and biochemical remission after six years without further treatment.

Treating Paget's disease

SIR,—Dr David Heath viewed the place of medical management of Paget's disease of bone somewhat pessimistically in the sense that the "almost exclusive" indication offered was for the treatment of bone pain (25 April, p 1048). In contrast, we believe that the development of the diphosphonates has revolutionised the potential for treatment of Paget's disease.

Whereas the effects of the calcitonins and mithramycin do not persist long after stopping treatment, diphosphonate treatment consistently results in

a reduction of disease activity for many months or even years after stopping treatment.¹ The question arises whether long term control of disease activity confers important advantages. Dr Heath concedes that this may be so in the case of bone pain, but there are other instances that suggest that the long term or more complete control of disease activity confers clinical benefit. The calcitonins, disodium clodronate and aminohydroxypropylidene diphosphonate, have been shown to halt the advance of Paget's disease.¹⁻³ Moreover, the decrease in bone turnover at affected sites seems to be associated with a resumption of lamellar rather than woven bone formation.^{4,6} These

This type of effect is analogous with tumour chemotherapy in the sense that the greater the decrease in tumour burden the longer the remission expected. The more favourable responses obtained in Paget's disease in patients with more complete biochemical responses may reflect the ablation of an abnormal osteoclast population. This phenomenon, together with the associated clinical improvements, suggests that indications for medical treatment will continue to increase and that treatment strategies for the future should include more meticulous attention to maximal suppression of disease activity.

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- 1 Kanis JA, Gray RES. Long term follow up observations on treatment in Paget's disease of bone. *Clin Orthop* 1987;217:99-125.
- 2 Doyle FH, Banks LM, Pennock JM. Radiologic observations on bone resorption in Paget's disease. *Arthritis Rheum* 1980;23:1205-14.
- 3 Nagant de Deuchaisnes C, Rombouts-Lindemans C, Huau JP, et al. Paget's disease of bone. *Br Med J* 1982;284:274.
- 4 Alexandre C, Meunier PJ, Edouard C, Khairi RA, Johnston CC. Effects of ethane-1-hydroxy-1, 1-diphosphonate (5 mg/kg/day dose) on quantitative bone histology in Paget's disease of bone. *Metab Bone Dis Relat Res* 1981;3:309-16.
- 5 Woodhouse NJY, Bordier P, Fisher M, et al. Human calcitonin in the treatment of Paget's bone disease. *Lancet* 1971;i:1139-43.
- 6 Yates AJP, Percival RC, Gray RES, et al. Intravenous clodronate in the treatment and retreatment of Paget's disease of bone. *Lancet* 1985;ii:1474-7.
- 7 Melick RA, Ebeling P, Hjorth PJ. Improvement in paraplegia in vertebral Paget's disease treated with calcitonin. *Br Med J* 1976;ii:627.
- 8 Douglas DL, Kanis JA, Duckworth T, Beard DJ, Paterson AD, Russell RGG. Paget's disease: improvement of spinal cord dysfunction with diphosphonates and calcitonin. *Metab Bone Dis Relat Res* 1981;3:327-35.
- 9 Douglas DL, Duckworth T, Kanis JA, Jefferson AA, Martin TJ, Russell RGG. Spinal cord dysfunction in Paget's disease of bone: has medical treatment a vascular basis? *J Bone Joint Surg [Br]* 1981;63:495-503.
- 10 Preston CJ, Yates AJP, Beneton MNC, et al. Effective short term treatment of Paget's disease with oral etidronate. *Br Med J* 1986;292:79-80.
- 11 Gray RES, Yates AJP, Preston CJ, Smith R, Russell RGG, Kanis JA. Duration of effect of oral diphosphonate therapy in Paget's disease of bone. *Q J Med* (in press).

The unacceptable face of tipping

SIR,—We would like to comment on the leading article by Dr Mark Woodhead and Professor Anne Tattersfield (11 April, p 921).

With regard to compliance, we agree that postural drainage is unlikely to produce appreciable benefit in patients expectorating a small volume of sputum and will rapidly be abandoned. Postural drainage is, however, beneficial at the time of the manoeuvre in patients producing larger (>30 ml daily) volumes of sputum (as carefully referenced in the article), and in these patients we think that, before poor compliance is attributed to a lack of symptomatic benefit, other factors should be considered. We certainly found that patients often reported that postural drainage was distasteful and disruptive to their daily schedule, but our questionnaire showed that many such patients throughout Britain had grasped neither the principles nor the correct practice of the treatment.¹ Thus when they performed postural drainage they practised it incorrectly, with suboptimal benefit and consequent poor compliance. We would therefore ask that doctors take an interest not only in the prescription of postural drainage but also in tailoring it to the needs of the patient's individual problems so as to encourage compliance in a practical sense rather than simply restating its necessity.

We believe strongly that a single set of instructions for all patients with chronic bronchial sepsis is a recipe for poor compliance and that best results are achieved by paying attention to the detail of the needs of the individual patient—both medical and socioeconomic. Once the problems are solved the benefits of expectorating sputum in privacy and at times convenient to the patient lead to more socially acceptable cough free periods in the day and less tiring cough free nights. This increases the benefit of, and confidence in, the treatment and ensures that postural drainage becomes an integral part of each patient's daily schedule. To this end, we have distilled the important points of the Brompton Hospital "training regimen" and presented them in a videotape with accompanying notes. There is a brief, simple introduction for doctors, and the remainder of the film is directed at patients. The purpose of this is, firstly, to acquaint doctors with what their patients should be taught so that they can reinforce it and answer queries about it and, secondly, to reinforce the physiotherapist's individual training for each patient.

Further research is required to answer many of the questions posed in the editorial, which are crucial to a better understanding of exactly what postural drainage may achieve. Dr Woodhead and Professor Tattersfield mentioned our "vicious circle" hypothesis for the pathogenesis of progressive bronchial damage in bronchiectasis but perhaps slightly misinterpreted it.² Purulent sputum is the result of an inflammatory host response^{3,4} to a colonising microbial load, and it is this response, together with microbial products,^{5,6} that damages the first line mucociliary clearance mechanism of the bronchial tree. Sputum retention is not proposed as the direct cause of the damage; it merely reflects the combination of the degree of damage to the mucociliary clearance system and the intensity of the host inflammatory response. Further research is required to clarify the role of mucus retention in determining microbial colonisation. In the mean time, however, postural drainage with special breathing methods, including the forced expiration technique,⁷ should be taught by a physiotherapist and individually prescribed to all patients expectorating more than 30 ml sputum daily—not simply to those who already have evidence of permanent lung damage, as judged by the presence of airways obstruction.

Finally, we agree with the sentiments expressed in the last sentence of the article by Dr Woodhead and Professor Tattersfield but would argue that in the end, as with treatment for many conditions, a combination of all current treatments will prove the most effective approach until the fundamental problem of how to prevent microbial colonisation of previously sterile biological surfaces is overcome.

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- 1 Currie DC, Munro C, Gaskell D, Cole PJ. Practice, problems and compliance with postural drainage: a survey of chronic sputum producers. *Br J Dis Chest* 1986;80:249-53.
- 2 Cole PJ. A new look at the pathogenesis and management of persistent bronchial sepsis: a "vicious circle" hypothesis and its logical therapeutic consequences. In: Davies RJ, ed. *Strategies for the management of chronic bronchial sepsis*. Oxford: Medicine Publishing Foundation, 1984:1-20.
- 3 Smallman LA, Hill SL, Stockley RA. Reduction of ciliary beat frequency in vitro by sputum from patients with bronchiectasis: a serine proteinase effect. *Thorax* 1984;39:663-7.
- 4 Sykes DA, Wilson R, Greenstone M, Currie DC, Steinfert C, Cole PJ. Deleterious effects of purulent sputum sol on human ciliary function in vitro: at least two factors identified. *Thorax* 1987;42:256-61.
- 5 Wilson R, Roberts D, Cole P. Effect of bacterial products on human ciliary function in vitro. *Thorax* 1985;40:125-31.
- 6 Wilson R, Pitt T, Taylor G, et al. Pyocyanin and 1-hydroxy-

phenazine inhibit the beating of human respiratory cilia in vitro. *J Clin Invest* 1987;79:221-9.

- 7 Pryor JA, Webber BA, Hodson ME, Batten JC. Evaluation of the forced expiration technique as an adjunct to postural drainage in treatment of cystic fibrosis. *Br Med J* 1979;2:417-8.

Hyposensitisation

SIR,—The leading article by Drs J O Warner and James W Kerr (9 May, p 1179) gives a reasonably balanced view of hyposensitisation. It also clarifies certain aspects of the Committee on Safety of Medicines (CSM) Update¹ and supports those who believe, as we do, that there is no need for patients to be observed for two hours after each injection. This recommendation alone has virtually put a stop to this treatment because even when full facilities for cardiopulmonary resuscitation are available few patients are willing to wait for two hours.

Drs Warner and Kerr do not mention that the incidence of reactions and deaths varies widely between manufacturers. For instance, Dome Hollister Stier vaccines caused no deaths and a much lower incidence of severe reactions in half a million injections,¹ and so it seems inequitable to class all of these preparations together.

The manufacturers have produced potent purified standardised allergenic vaccines and testing extracts in response to constant pressure from clinical allergists and researchers. Clinicians accustomed to using the weaker standardised vaccines formerly available may not realise the potency of these new vaccines and that more care with dosage is necessary. At the same time, the increase in effectiveness of drug treatment has made the control of patients with asthma much easier, and dependence on oral steroids, once a major indication for desensitisation, has become uncommon. As a result, hyposensitisation may now be considered for only the most sensitive and difficult patients, but such patients are also most liable to react adversely to hyposensitisation. It seems relevant to discuss anaphylactic reactions in a broader context. For example, the CSM Update for April 1986 reported reactions to anaesthetics for 1964-85, including 561 reactions to local anaesthetics, 19 fatal. In September 1986 the CSM annual review of yellow cards for 1985 reported 189 anaphylactic reactions, of which only 21 were due to desensitising injections. In November 1986 the CSM Update on adverse effects from anti-infective drugs for 1964-86 listed 155 reported cases of anaphylaxis.

A seven year survey of reactions to diphtheria/tetanus/pertussis vaccines reported 33 cases of anaphylaxis or collapse.² Recently, three cases of severe anaphylaxis were reported among only 200 American service staff who received skin tests with tetanus toxoid to detect hypersensitivity before immunisation.³

These reports illustrate how any injected drug may also cause lethal anaphylaxis, including local anaesthetics in dentistry or minor surgery. Thus hyposensitising injections are not a common cause of anaphylaxis, and a broader approach to this problem would be more appropriate. For example, sudden collapse can occur in the surgery, and immediate resuscitation can save life. Hence it is logical to suggest that all health centres should have cardiopulmonary resuscitation facilities on site, especially in rural areas, but very few are thus equipped and staff are not all trained in the use of such equipment.

Ewan and Ackroyd agree with the CSM but seem to take a negative view of the efficacy of desensitisation⁴ while others now consider it to have a useful place. This is surprising in view of the fact that for the past five years Dr Ewan has been in charge of the very department where the method