Dexamethasone deleterious in cerebral malaria

Quinine (given by intravenous infusion) is effective treatment for most patients with falciparum malaria even when this is complicated by coma, jaundice, or renal failure. About 20% of patients with falciparum malaria develop cerebral symptoms such as coma, convulsions, or confusion. Mild coma may improve after a small dose of intravenous quinine or chloroquine, but deep coma may proceed to death despite treatment—and indeed, the death rate in cerebral malaria remains at 20%. Coma of intermediate severity may persist for up to about 10 days and be cured only by painstaking titration of the dose of quinine, fluid balance, and other factors.

Many additional forms of treatment have been tried in the hope of improving the prognosis of falciparum coma. In November 1967 Daroff et al described 19 patients with cerebral malaria, not all of whom were in coma.1 Besides antimalariais, those more severely affected (number not specified) were given dexamethasone, dextran, and diphenhydantoin. The report implied that this polypharmacy was effective. In July 1968 Woodruff and Dickinson described one patient with falciparum coma in this journal.3 He had acquired the malaria in India and had a parasitaemia of 50%, on admission, which was reduced to 0.1%, after intravenous chloroquine. The coma persisted, however, and 24 hours after its onset 10 mg of dexamethasone was given intravenously. Four hours later the patient woke. The authors concluded that “dexamethasone had a dramatic and life-saving effect” and recommended that dexamethasone should be given routinely in cases of cerebral malaria. Quickly, however, Harding commented that observations on a single case were not conclusive and called for a controlled study.4 Another single case was reported in which a corticosteroid had not been helpful5; yet another writer considered that a controlled trial was not indicated,6 and Woodruff considered that such a trial would be unethical.7 The bandwagon rolled, and since 1968 all but a few books and review articles have recommended treatment with corticosteroids for cerebral malaria.

As long ago as 1972, however, a controlled study by Reid and Nkrumah found no benefit from dexamethasone in four patients.8 A review in the BMJ in 1976 concluded that a controlled trial of corticosteroids in falciparum coma was long overdue because their value had not been established. Warrell et al.9 have now compared dexamethasone with placebo in a double-blind trial in 100 patients (aged 6 to 70) in Thailand.10 In adults the initial dose of dexamethasone was 0.5 mg per kg followed by seven doses of 10 mg each. The total duration of treatment was 48 hours. Dexamethasone increased the duration of coma (63 versus 47 hours) and the incidence of complications including pneumonia and gastrointestinal bleeding. The authors concluded that dexamethasone is deleterious in cerebral malaria and should no longer be used. Those writing textbooks and review articles please note.

Anthony P Hall
Consultant Physician, Hospital for Tropical Diseases, London NW1 0PE


Lumbar spinal stenosis

The first recognisable example of lumbar spinal stenosis is provided by the achondroplastic Greek god Hephaestus, who limped as the result of trauma to an already narrowed spinal canal.1 Spinal stenosis has become familiar only recently as an important cause of chronic debility—and one that responds to treatment. The term is used to describe any type of narrowing of the lumbarosacral canal, nerve tunnels, or intervertebral foramina.2 The L5 and S1 roots are especially vulnerable, since they run a long, oblique course within the spinal canal before changing direction to emerge through the exit foramina.3 Compression may occur at any level through central prolapse of a disc, as in the original case reports of intermittent claudication of the cauda equina (the Blau-Logue syndrome);4 from hypertrophic changes within a narrowed spinal canal;5 angulation through loss of disc height; with degenerative disc disease, Paget’s disease, spondylolisthesis, and spondylosis