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LETTER TO THE EDITOR

Response to 'The administration of high-dose methylprednisolone for 24 h reduced muscle size and increased atrophy-related gene expression in spinal cord-injured rats'

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Wu *et al.*[1] are to be congratulated on their critical experimental work on the adverse effects of high-dose methylprednisolone in the treatment of spinal cord-injured rats. Methylprednisolone treatment was introduced some 20 years ago, and it has received widespread acceptance with a view to improve functional neurological outcome after an acute spinal injury. There is little evidence to support its use.

On the other hand, there has been a critical prospective randomised clinical trial by Pointillart *et al.*[2] between 1990 and 1995, which showed no benefit from the early use of methylprednisolone in spinal cord injuries.

In 2000, Short *et al.*[3] carried out a systematic literature review on three clinical trials and six cohort studies reviewing the use of methylprednisolone in acute spinal injury patients and found no benefit. They also stated that a deleterious effect on early mortality and morbidity could not be excluded.

When this therapy was recommended to me in the 1990s, I wanted clarification on three points before I treated patients under my care with this therapy.

(1) What evidence was there that the steroids penetrated to the injured spinal cord?
(2) I was only willing to carry out this treatment, which was of an experimental nature, once I had seen a computerised tomography scan and a magnetic resonance imaging of the patient's spinal column and cord.
(3) I asked how this treatment could be administered within 8 h of injury.

There was no answer to the first question and I was told that in answer to the second question, they did not even X-ray the patients. Finally, the steroid was administered by the paramedical staff in the ambulance before admission to hospital.

Faced with this, I was unhappy to use the therapy, especially as in my own previous studies I had been concerned about the particular risk of bleeding in spinal cord injuries, and in two publications[4,5] I looked at a total of 439 patients with acute traumatic spinal injuries: 206 cervical, 182 dorsal and 51 lumbar cord lesions, and found that 27 of the 439 patients (6.15%) bled from the gastrointestinal tract, 10 of these had received steroids before admission to the National Spinal Injuries Centre.

Kuhn (personal communication) reported an incidence of 50% ulceration of the upper gastrointestinal tract in acute spinal injuries, and Tribe (personal communication) also reported a high incidence of ulceration of the gastrointestinal tract.

Patients with spinal cord injuries have a high incidence of stress ulceration, and for this reason alone I was unwilling to use steroids in the treatment of acute spinal injuries and wrote in my paper: 'There is little evidence to support the use of steroids following acute spinal injuries, and this cause of ulcers could be avoided'.[4]

As I considered in 1986 that there was little evidence to support their use, I have never used steroids for the treatment of patients with acute traumatic injury of the spinal cord.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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1 Wu Y, Hou J, Collier L, Pan J, Hou L, Qin W *et al.* The administration of high-dose methylprednisolone for 24 h reduced muscle size and increased atrophy-related gene expression in spinal cord-injured rats. *Spinal Cord* 2011; **49**: 867–873.
2 Pointillart V, Petitjean ME, Wiart L, Vital JM, Lassié P, Thicoipé M *et al.* Pharmacological therapy of spinal cord injury during the acute phase. *Spinal Cord* 2000; **38**: 71–76.
3 Short DJ, El Masri WS, Jones PW. High dose methylprednisolone in the management of acute spinal cord injury – a systematic review from a clinical perspective. *Spinal Cord* 2000; **38**: 273–286.
4 Walters K, Silver JR. Gastrointestinal bleeding in patients with acute spinal injuries. *Int Rehabil Med* 1986; **8**: 44–47.
5 El Masri WS, Cochrane P, Silver JR. Gastrointestinal bleeding in patients with acute spinal injuries. *Injury* 1982; **14**: 162–167.