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Dear Editor,

The paper by Graham et al¹ highlights recent changes in the management of spinal cord injury (SCI) from nonoperative to operative treatment of the spine with a decline in the degree of neurological recovery. There are not many clinicians who have managed SCI patients as well as experienced the condition itself, so I offer some personal reflections on my experience from both perspectives.

The most important concern for a patient suffering from SCI is neurological recovery, however that is achieved and, within reason, however long it takes. A one-level rise in neurology can make all the difference between being independent and being dependent.

I trained as a surgeon and, in 1984, having finished my day's clinical work, I drove 180 miles to visit friends. My car skidded into a ditch outside the house of a dentist, who immediately came out and, realising the nature of my injury, ensured that the ambulance men rescued me through the broken windscreen with my head suitably supported. My first memory was being wheeled into the local district hospital casualty department 25 minutes after the incident with impaired sensation in my arms and over the lower body and with no movement below my wrists (C6 Frankel B). Radiographs showed a fracture of a pedicle of C5 and lateral mass of C6. Halter traction was started and that night it was noted that I started moving my left hallux. The following day, I was slowly transferred by police escort to the local spinal injury centre 35 miles away, to which I was admitted 15 hours after my injury. The team there started 10lb skull traction and I was turned regularly on a Stoke Mandeville/Egerton turning bed by two people to prevent pressure sores and on alternate days by four nurses for bowel care and washing, which had to be done for everyone. I had limited experience of SCI when a surgical registrar and, although surgery was considered, the orthopaedic consultant in charge of my care, decided that the best way to promote neurological recovery was for me to remain horizontal on traction for 12 weeks. I would not have had the knowledge I now have to make a rational decision on this, even less so would a layperson. Also, the upset caused by such an injury means that one is at the mercy of those who are advising treatment in the early stages. I had no pain in my neck, the skull traction was not uncomfortable, and I felt stable. The day after my admission, a patient was admitted with a dislocation of his cervical spine. He was taken to theatre to have this reduced by my orthopaedic surgeon and remained horizontal for eight weeks, when he was mobilised because he was becoming non-compliant. He did recover but, being troubled by increased spasticity, required two crutches thereafter. Another patient came in later but was mobilised earlier because he remained in complete tetraplegia.

I had an hour of physiotherapy every morning and afternoon on my bed. During the first three weeks, power returned to the whole of my left lower limb and during the next three weeks my left arm and hand recovered such that I was able to feed myself. On the right side there was no improvement neurologically until, after eight weeks of recumbency, my physiotherapist noticed a flicker of voluntary activity in my right quadriceps. Further recovery occurred in my right lower limb, but only in the extensor muscles of hip and knee and with plantarflexion of the ankle. My right hand and wrist improved only slightly. At no time did I experience any neurological deterioration and, after 12 weeks, the traction was removed. After sitting up in bed for a couple of days I was mobilised into a wheelchair. The first day I experienced orthostatic hypotension about 20 times and had to be tilted back, so I was only up for two hours, but without any change in neurology. The following day I was up for eight hours without any problems and, two days later, I was able to stand in the gym with the support of two physiotherapists. I would not have been able to do this had I been mobilised any sooner. I had three hours of physiotherapy and an hour of occupational therapy each weekday and, after seven weeks, I left hospital to live at home independently, walking with one stick (Frankel D), which I soon stopped using except on uneven ground, such as when I climbed Snowdon ten years later. I resumed clinical work full-time three weeks after leaving hospital and continued working until I retired 27 years later at age 65. A year after my injury, I went to Africa to work for Malawi Against Polio, a charity that helped children and adults with lower limb problems, mainly polio and clubfeet. Despite only having limited function in my right hand, I was able to carry out many hundreds of orthopaedic operations there over the next five years. Many patients with SCI managed by nonoperative or operative means have similar stories. Time for recovery is necessary and rewarding for both patient and staff.

When I came back to this country, I did higher training in the specialty of SCI during which I noted the improvements that many patients made following paralysis managed by the Stoke Mandeville System (SMS), but also went to the USA to observe the Spinal Cord Injury Model Systems (SCIMS) there. When I became a consultant, many patients came from other hospitals where they had had surgical intervention, as in the USA, so following the SMS was compromised. Some had deteriorated neurologically in the referring hospital.

After 40 years of independence, ageing with an SCI and natural deterioration took its toll, and after injuring my shoulder trying to stand up, I was admitted to a spinal cord injury centre for a couple of months to help me manage at home again. Of course I did not have access to their medical history, but many fellow SCI patients were disappointed by neurological deterioration after recent surgery when they had expected improvement but would not complain as it would have seemed critical of the team trying to help them. I felt that some would have declined had they known what might happen, and that some could have been managed without surgery. They were often under the mistaken belief that surgery was necessary and that fixing the bones could lead to a better neurological recovery.

In their editorial, N.V. Todd et al² suggest that surgical fixation comes with low morbidity, but it may cause further insults to the cord, compromising recovery. This may occur during the manipulation for intubation and in positioning the anaesthetised patient, as well as chiselling and drilling close to the spinal canal. Surgery may interfere with the blood supply to the cord and cause venous congestion and oedema which may increase pressure within the spinal canal. There may also be periods of hypoxia, and toxic effects of anaesthetic agents on an injured spinal cord, as well as the risk of infection arising in the wound or chest subsequently. Swallowing can also be affected with cervical surgery, resulting in the patient needing a gastric peg. There is also reduced mobility of the spine when the fixation extends further than the injury. There may be associated injuries which need to be addressed, warranting surgery or intensive care, but surgery to the spine could be delayed to a time when flexion/extension radiographs show abnormal movement after a few weeks of SMS

management, when the effects of the initial trauma have settled. The duration of recumbency will depend on clinical progress.

When I was working in Malawi, Edgar Somerville, former orthopaedic consultant at the Nuffield Hospital in Oxford, came out to help me and I remember him saying to me that while a surgeon should be skilled in their operative technical ability, it was just as important to make an appropriate decision on whether to operate or not and, if surgery could be avoided, then it was wise to do so.

The indications for surgery to the spine in the presence of spinal cord injury have been documented before and are highlighted in Graham et al's paper.¹ They are:

- (a) Epilepsy;
- (b) Psychiatric and neurodiverse conditions;
- (c) Lack of compliance;
- (d) Ligamentous injuries without bony damage such as in some dislocations.

With neurological deterioration, the cause should be investigated because surgery may not improve the symptoms.

Patients should also be given the choice of management with a full explanation at a time when they can take on board the implications.

Using the above criteria would facilitate prospective studies, taking into account the extreme variability in SCI and its severity. Graham et al's paper¹ clearly shows concerns that many of us with SCI, or who are involved in treating the condition, have about the move recently from nonoperative management (SMS) to surgical treatments (SCIMS). Are we, as patients with SCI, to believe that making it easier for medical, nursing, and therapy staff to manage spinal cord injuries and saving money (both of which are questionable), as Todd et al² suggest, take priority over achieving the greater degree of neurological recovery the established SMS has provided with adequate stability successfully for decades before?

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1. **Graham JM, Graham BT, El Masri WS.** Traumatic spinal cord and cauda equina injury. *Bone Joint J.* 2026;108-B(3):425-430.

2. **Todd NV, Ross AC, Birch NC, Brown M, Gardner A.** Care following acute traumatic spinal cord injury. *Bone Joint J.* 2026;108-B(3):271-273.

Conflicts of Interest: None

AI: AI technology was not used to create any part of this letter.