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Letter to the Editor

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We read with interest the recent letter to *Spinal Cord* by Soni *et al*.[1] They describe a complex series of events in a patient with a sacral anterior root stimulator (SARS), which culminated in the disuse of the implant. We were very surprised to read that the Authors' concluded from this single case that 'the indications for implantation of SARS in spinal cord injury are becoming limited'. In principle, we believe that such uncorroborated statements, without a proper scientific basis are both unjustifiable and unhelpful.

In this particular case, *anterior* body wedge compression fractures of L4 and L5 vertebrae may have resulted from minimal-force trauma of osteopenic bone. This would not be an uncommon incident in a spinal cord-injured patient.[2] A previous laminectomy (*posterior* elements of the vertebrae) may be coincidental. Therefore, the observed fractures may well have occurred even if this patient had not had a SARS implantation. Hence, there need not be a direct causal link between implantation and development of the described complications. However, we concur that when such fractures are identified, the patient should be counselled that further use of the implant (that can elicit hip extension via S2 root stimulation) can exacerbate a spondylolesthetic instability at the fracture level. This can then cause complications such as abdominal spasms or autonomic dysreflexia, which indeed the authors have reported. Our experience (and that of others) is that this is an extremely rare event.[3] Those patients at high risk of osteoporosis may benefit from a preoperative DEXA scan, and managed as appropriate if bone mineral density is found to be low. The implantation may then be deferred to a later date.

We believe that this single case is misrepresentative of the overall benefits of SARS. We would of course agree with the authors, in so far as 'patients should be given data regarding potential complications of SARS to enable them to make an informed decision'. Conversely, patients should also be made aware of the considerable benefits and quality of life improvements that may be achieved.[4] Our Spinal Injury Unit's longstanding experience with SARS has shown that patients derive excellent benefit from the procedure, and that the system is well tested and reliable; this is in agreement with other groups.[3,5,6] Clear benefits such as avoidance of catheterisation, reduction in urinary tract infections, improved bladder capacity, efficient voiding and general quality of life improvements must be reiterated. Many of these benefits are not offered by other modalities of current management. In addition, although high doses of modified release anticholinergics may be of use in a subgroup of patients,[7] these newer and more expensive drugs (usually in combination with intermittent catheterisation) may demonstrate reduced cost effectiveness when compared to SARS.[8] Additionally, our interest in the development of the system has led to the possibility of performing the implant leaving posterior nerve roots intact, and applying neuromodulation via posterior nerve roots to increase bladder capacity.[9] Reflex erections and ejaculation may thus be preserved, and further neural destruction is avoided. Furthermore, the same implants can also be useful for bowel management, erectile function and spasm control and may in the future be helpful for preventing pressure sores.

Contrary to the assertion of Soni *et al* it would appear that there is an expanding need and great potential benefit from the use of sacral nerve root stimulator implants in people with spinal cord injuries.

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