

## Letter to the Editor

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### In reply to S Vaidyanathan *et al*

We have read with great interest the letter of Vaidyanathan *et al*. We agree with his notion that method of bladder management should be reviewed and changed if necessary during follow-up visits. We have similar observations in our chronic spinal cord injury patients as their bladder behaviours change over time.

Reorganization of reflex pathways in both peripheral and central nervous system has been shown after spinal cord injury in animal studies. Part of this reorganization may be influenced by neural-target organ interactions that are mediated by neurotrophic factors released by the peripheral organs. The changes in synthesis or release of trophic factors by target organs in the lower urinary tract appear to alter the properties of bladder afferent pathways. Actions of transmitters and receptor sensitivities could change after spinal cord injury.<sup>1</sup>

Besides reorganization theory, secondary cord changes (e.g. syrinx or tumor formation) leading bladder to change behaviour should also be remembered. Changes in bladder behaviours could precede other neurologic symptoms and signs of secondary cord changes.

As a conclusion, we believe that despite its cause is still not clear, most patients present with a bladder behaviour change during their disease course. Therefore, this unstable behaviour pattern necessitates a close follow-up protocol and

reassessment of bladder management and make appropriate revisions in the treatment during each follow-up visit. Otherwise, to strictly stick to the same bladder management in the same patient may bring suboptimal results with increased morbidity and decreased quality of life. Spinal cord injury is an ongoing problem with its complex neurophysiological mechanism and each aspect of its presentation deserve thorough investigation. As the course of the disease is not stable in each patient, any required changes in the treatment should be made when needed.

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### Reference

- 1 Groat WC. Anatomy and Physiology of the Lower Urinary Tract. In: Bodner DR (ed). *Urologic Clinics of North America* 1993; 20(3): 383-401.