

EDITOR'S PAGE

The encrustation and blockage of longterm indwelling catheters



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Dear *Spinal Cord* reader,

The method of draining the bladder after spinal cord lesion has seen significant evolution during the last century. Lately indwelling catheters seem to have regained some credit. Evaluations have shown that for specific patients intermittent catheterization is simply impossible or is refused. One may regret this but more important is to try and optimize the application of alternatives. As always the long-term results will depend equally upon the bladder dysfunction, the method itself and the way the method is applied.

Stickler and Feneley have reviewed the literature on how Foley catheters become encrusted and blocked by crystalline bacterial biofilms. They found evidence that elimination of *Proteus mirabilis* by antibiotic therapy as soon as it appears in the catheterized urinary tract could improve the quality of life for many patients and reduce the current expenditure of resources when managing the complications of catheter encrustation and blockage. For patients who are already chronic blockers and stone formers, antibiotic treatment is unlikely to be effective owing to the resistance of cells in the crystalline biofilms. Strategies such as increasing fluid intake with citrated drinks could control the problem until bladder stone removal can be organized. This practical information will be of use to many.

We have two interesting animal studies in this issue:

In a rat model, Mirzaei *et al.* investigated the role of glutamate transporters (GTs) after nerve injury in order to compare changes in GTs' mRNA expression levels between chronic constriction nerve injury and spared nerve injury models of peripheral neuropathic pain. Their results indicate that there is an inverse correlation between pain responses and the expression of GTs, and also that changes in expression of spinal GTs may play a critical role in both the induction and maintenance of neuropathic pain.

In a rat experiment, Marcon *et al.* showed that hyperbaric oxygen can potentialize the effect of GM1 ganglioside.

Also, Dunn *et al.* studied the uptake of upper limb surgery by persons with tetraplegia in New Zealand.

Jones *et al.* describe in a post-hoc analysis from a randomized controlled cellular therapy trial in acute, complete spinal cord injury (SCI), how, of the 1816 patients pre-screened, 50 could be randomized, due to eligibility criteria and logistics. Their data provide information on current practice patterns and may facilitate the design of future trials.

Yaşar *et al.* showed positive effects on the distribution of buttock-seat interface pressure in a group of spinal cord injury (SCI) patients with adductor spasticity that underwent obturator nerve blockade with phenol.

Abreu *et al.* assessed the importance of proprioceptive and vision information on different types of wheelchair seats with regard to postural control in paraplegic individuals during static posture. They suggest that individuals with paraplegia tend to exhibit a more antero-posterior body displacement than medio-lateral, with no significant differences between the types of seats with eyes open or closed.

More interesting studies: Guertin and Rouleau compare biochemical profiles (blood and urine) of traumatic and non-traumatic spinal cord-injured patients; Zeilig *et al.* give a retrospective analysis of civilians with SCIs due to terror explosions; and Won *et al.* present the case of development of superior mesenteric artery syndrome in a tetraplegic patient, 11 years after a spinal cord injury.

Enjoy reading.