LETTER TO THE EDITOR

Bacteriuria and urinary tract infection after urodynamic examination of spinal cord injury patients

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Bothig *et al.*¹ have analyzed the incidence of urinary tract infection (UTI) after urodynamic studies (UDS) in spinal cord injury (SCI) patients. This issue is of utmost importance, as UDS is an invasive procedure frequently indicated to these patients, but the need of prophylactic antibiotics is not well established. Despite the fact that all participants on the Bothig study were into the hospital,¹ a high proportion of patients with basal sterile urine (93/133 = 69.9%) is outstanding.² Independently from the bladder management method, a higher incidence of UTI among patients with unsuspected bacteriuria prior to UDS was observed (32.5% versus 8.6% among patients with basal sterile urine; Mantel–Haenszel summary $\chi^2 = 22.31$; $P < 0.0001$). Even more interesting was the fact that, 3–5 days after the UDS, half of the patients with previous unsuspected bacteriuria presented sterile urine, independently from the bladder management method (Mantel–Haenszel summary $\chi^2 = 40.13$; $P < 0.0001$). In other words, considering the incidence of UTI post UDS in patients with previous asymptomatic bacteriuria, we conclude that prophylactic antibiotics may be necessary. On the other hand, most of the patients with previous asymptomatic bacteriuria will present sterile urine after UDS, as if the UDS had ‘washed’ the bladder. To better analyze and interpret these results, it is necessary to investigate the patient’s profile with the main confounding variables such as age, gender, level, completeness and length of the spinal cord lesion. The exact voiding methods used by the patients and the main results of the UDS (bladder dysfunction type), together with other imaging of the urinary tract, will also enlighten the correct

interpretation of the results.³ Large, randomized prospective studies specifically related to patients with neurogenic bladder will be mandatory here.² Until then, a well-conducted multivariate analysis of observational studies may help the decision regarding which patients will benefit from the use of prophylactic antibiotic, contributing to the control of the potential threatening increase of bacterial resistance.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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- 1 Bothig R, Fiebag K, Thietje R, Faschingbauer M, Hirschfeld S. Morbidity of urinary tract infection after urodynamic examination of hospitalized SCI patients: the impact of bladder management. *Spinal Cord* 2013; **51**: 70–73.
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- 3 Esclarin de Ruz A, Leoni EG, Cabrera RH. Epidemiology and risk factors for urinary tract infection in patients with spinal cord injury. *J Urol* 2000; **164**: 1285–1289.