

URODYNAMICAL EVALUATION OF BLADDER SENSATION AS PRACTICAL ALARM OF CATHETERIZATION IN SPINA BIFIDA PATIENTS

Hypothesis / aims of study

Clean intermittent catheterization (CIC) nowadays is a gold standard for urine drainage in spina bifida (SB) patients. In general, CIC every 2 to 3 hours is recommended for security, whereas most of SB patients express some kind of sensation when their bladder distended. The aim of this study is to evaluate whether or not the bladder sensation of SB patients can be utilized as an alarm of CIC.

Study design, materials and methods

A prospective study was conducted in 37 SB patients (male/female:16/21, mean age 14.3y.o.) under management with CIC. Patients who could not inform properly what they felt during the examination because of prematurity or cognition problem were excluded from the study. Cystometry was performed in standard manner. Carefully recorded was every sensation the patient felt during bladder filling and the infused volume (Vves.) and the detrusor pressure (Pdet.) thereof. In cases with detrusor overactivity (DO), the minimum bladder volume at onset of involuntary detrusor contraction and the maximum detrusor pressure were also recorded. Prevalence of bladder sensation, its characteristics and correlation with detrusor pressure were investigated.

Results

Twenty-nine out of 37 patients (78.4%) possessed bladder sensation. There were no significant differences with regard to gender, age and parameters of cystometrogram between patients with bladder sensation and those without it. In most of the patients with bladder sensation, the feeling of both first desire to void (FDV) and strong desire to void (SDV) were like those in population with normal sensation, whereas some patients expressed the feeling as a kind of pain. There were no relationship between patient's age and the bladder volume at FDV and SDV, respectively. Among the 16 patients with SDV at over 200ml of bladder volume, Pdet. at SDV were lower than 40 cm H₂O in 15 patient. Eight patients out of the 15 patients presented DO before reaching SDV on cystometrogram and the maximum detrusor pressure of involuntary detrusor contraction exceeded 40 cm H₂O in 3 of them. In another patient, leakage around the catheter occurred before reaching SDV during the examination.

Interpretation of results

As high as 80% of spina bifida patients possess some kind of bladder sensation. From the results of our study, in 11 out of 37 patients (29.7%) the bladder sensation seems to be used as an alarm which informs when to do CIC. For SB patients under management with CIC, doing it not depending on time but their own sensation could bring better QOL to them.

Concluding message

Not all but a group of SB patients has a chance to gain advantage of doing CIC depending on the bladder sensation.

Disclosures

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