

CORRELATION BETWEEN DETRUSOR AFTER-CONTRACTION AND OVERACTIVE BLADDER SYNDROME, DETRUSOR OVERACTIVITY AND POST-MICTURITION DRIBBLE

Aims of Study

Detrusor after-contraction is an urodynamic observation of uncertain significance(1-2). Aim of this study was to assess the prevalence of detrusor after-contraction in patients undergoing urodynamic evaluation and its correlation with overactive bladder syndrome, detrusor overactivity and post-micturition dribble.

Methods

From a large urodynamic data base we retrospectively evaluated 358 patients (131 males and 227 females) who underwent filling cystometry and flow-pressure study for lower urinary tract symptoms (LUTS), neurological diseases or post-operative follow-up. Methods, definitions and units conform to the standards recommended by the International Continence Society, except where specifically noted. Detrusor after-contraction was considered as a sudden increase in detrusor pressure – regardless of its amplitude – after cessation of voiding detrusor contraction and in the absence of flow.

The results were statistically evaluated using Chi-square test with SPSS 10.1 software. P-values <0.05 were considered statistically significant.

Results

The overall prevalence of detrusor after-contraction was 15.6% (56/358 pts).

In the 56 pts with detrusor after-contraction, the prevalence of overactive bladder, of detrusor overactivity and of post-micturition dribble was 76.2% (41/56 pts), 69.6% (39/56 pts) and 26.8% (15/56 pts), respectively. A statistically significant correlation was found between overactive bladder ($p < 0.01$) and DA-C and between detrusor overactivity and detrusor after-contraction ($p < 0.02$), while there was a lack of correlation between post-micturition dribble and detrusor after-contraction ($p = 0.287$).

Conclusions

So far, different explanations have been suggested for detrusor after-contraction, such as an expression of detrusor overactivity or of post-micturition dribble(1,3). The latest ICS standardisation does not even mention this entity.

In the few studies in the Literature a prevalence of detrusor after-contraction considerably higher than the findings of the present study is reported (56% vs 17%) (3). A possible difference in the study populations or a not homogeneous interpretation of detrusor after-contraction, due to the lack of standardisation, could explain this divergence.

In our study a very high prevalence of overactive bladder and detrusor overactivity was found among pts with detrusor after-contraction (76% and 70% respectively). On the other hand, there was only a very low prevalence of post-micturition dribble among pts with detrusor after-contraction (less than 27%). These findings confirm the few data of the Literature (3) and, if confirmed by further prospective studies, they could lead to consider detrusor after-contraction a sign of detrusor overactivity.

References

1. The after-contraction: a true detrusor contraction or a late dyssynergic urethral sphincter contraction? Br J Urol Int 85 (3): 246-248, 2000.
2. The after-contraction in paediatric urodynamics. Br J Urol 78: 780-782, 1996.
3. Prevalence and significance of detrusor after-contraction. Urologica 10 (2): 112-113, 2000.