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Title (type in
CAPITAL
LETTERS)**DYSFUNCTIONAL VOIDING: ENHANCED SCORES THROUGH
'COMPARATIVE' (NACL VS 0.2 M KCL) PRESSURE FLOW STUDIES**

Introduction: Since the activity (tone) of the rhabdosphincter (continence reflex) increases with increasing bladder filling (=increasing spontaneous detrusor excitation) and the spontaneous detrusor excitation can be even further enhanced by intravesical potassium (K+) in the presence of urothelial GAG-layer (glycosaminoglycan) deficit, one could assume that a higher score can be achieved by 'comparative' pressure flow studies in detecting dysfunctional voiding (DV) especially in patients suffering from urgency/frequency.

Methods: 'Comparative' (normal NaCl vs 0.2 M KCl) pressure flow studies were carried out on 79 patients with irritable symptoms (urgency/frequency syndrome = 28; prostatodynia = 13; urge incontinence = 34; interstitial cystitis = 4). The cohort consisted of 61 responders (a drop of maximum cystometric capacity > 15%) and 18 non-responders to intravesical K+. DV induced by K+ was defined by pelvic floor EMG alone and/or by a significant reduction in the maximum uroflow (Qmax).

Results: Sixteen percent of patients demonstrated DV with NaCl alone. In these patients, however, this was considerably worsened by KCl. An additional 25% of patients exhibited DV only in the presence of KCl. The average Qmax dropped from 22.4 to 12.6 ml/sec while the average detrusor pressure at Qmax rose from 52.5 to 60.4 cmH2O. In 56% of patients, the DV-KCl would have remained undetected by EMG alone. There was an equal proportion of DV-KCl among responders and non-responders to intravesical K+.

Conclusions: Our data show in a high percentage of urge bladders that their irritable symptoms either lead to a non-neurogenic DV or result from it. To what extent this phenomenon is caused by overactivity of the continence reflex (better, inability of the bladder outlet to relax) or by intravesical K+ directly targeting either the bladder neck and/or the rhabdosphincter via a 'leaky' (atrophied, inflamed) urethral urothelium is not yet clear. For diagnosis of DV, the 'comparative' pressure flow study is far superior to conventional methods. Furthermore, it can be concluded that a normal native uroflow with low osmolar urine (=little K+) excludes with certainty only the presence of a structural obstruction.