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Authors: S. Madjar, M. Balzarro, R. Appell, M-B. Tchetgen, R. Rackley, D. Nelson
Institution: Cleveland Clinic Foundation
Title: A COMPARATIVE STUDY OF DETRUSOR INSTABILITY AND VALSALVA INDUCED DETRUSOR INSTABILITY

Aims of Study:

Valsalva induced detrusor instability (VIDI) or detrusor instability preceded by increased intra-abdominal pressure was recently described as an entity different from detrusor instability (DI). Mechanisms suggested to contribute to the induction of bladder instability by straining include weakness of the urethral sphincteric mechanism leading to funneled proximal urethra that allows urine to enter the proximal urethra with straining, and stretching of pelvic nerves leading to overactive bladder. To further characterize this entity, the differences between patients with VIDI and DI were retrospectively analyzed.

Methods:

The charts and urodynamics results of all patients who underwent an anti-incontinence procedure between February 94 and October 99 were retrospectively reviewed. Out of 313 patients with stress incontinence, 62 patients (19.8%) had VIDI and 25 patients (7.9%) had DI. History, physical examination, urodynamic data, operative procedure, and surgical outcomes were compared between the two groups.

Results:

When compared with DI, VIDI was correlated with younger age (56.9 vs. 65.0 years, $p=.003$), increased weight (81.5 vs. 72.64 kg, $p=.0258$), milder incontinence (3.2 vs. 4.7 pads/d, $p=.039$), increased urethral hypermobility as measured by a Q tip test ($p=.03$), and increased VLPP (76.7 vs. 54.4 cmH₂O, $p=.03$). Patients with VIDI obtained higher levels of abdominal pressure with straining ($p=105.2$ vs. 75.1 cmH₂O, $p=.001$) and reached higher abdominal pressure over time of straining (steeper slopes of abdominal pressures with straining). Surgical outcomes were not correlated with the type of detrusor instability.

Conclusions:

VIDI is correlated with patients' ability to achieve higher levels of abdominal pressures while straining and with anatomical stress incontinence as opposed to intrinsic sphincteric deficiency type of stress incontinence. The definition of VIDI as a separate entity from DI should be based on differences in patients' clinical and physiological characteristics more than on its ability to predict surgical outcomes of anti-incontinence procedures.

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