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EDITORIAL

Classifying Stress Urinary Incontinence

According to both the International Continence Society (ICS) and the Urodynamics Society, urinary incontinence denotes a symptom, a sign, and a condition. The symptom stress incontinence indicates the patient's statement of involuntary loss of urine during physical activity. One cannot argue with that. The sign is the objective demonstration of urinary loss (i.e., witnessing the act of incontinence by the examiner). One cannot argue with that either. The ICS goes on, though, to define the condition as the urodynamic demonstration of "genuine stress incontinence," i.e., "the involuntary loss of urine occurring when, in the absence of a detrusor contraction, the intravesical pressure exceeds the maximum urethral pressure." While this latter statement may or may not be true, it does not provide a usable substrate for classification of stress incontinence.

Classification of stress urinary incontinence is important for several reasons: first, to facilitate understanding of etiology and pathophysiology; second, to provide a rational basis for devising therapeutic strategies; third, to provide a means of comparing and stratifying patients for outcome analyses. To classify, however, there need to be mutually exclusive criteria for each category. Currently, such a classification system does not exist. Further, there need to be accurate diagnostic techniques for distinguishing one type of incontinence from another. Unfortunately, these do not exist either. Nevertheless, we need to classify as accurately as possible using the most reasonable tools available for diagnosis.

At present, the most reasonable tools for diagnosis and classification of stress urinary incontinence are 1) the patient's history (to document the symptom), 2) the physical examination (to document the sign), 3) a micturition diary (to corroborate the symptom), 4) a pad test (to document the volume of urinary loss), 5) the leak point pressure (to quantitate sphincter strength), and 6) a measure of urethral hypermobility. Although there are no standardized techniques for measuring leak point pressure or urethral hypermobility, these are, nevertheless, useful diagnostic tools that, I believe, will stand the test of time. If a patient has the condition of stress incontinence, he or she must, by definition, have a weak sphincter; the vesical and/or abdominal leak point pressure is the most reasonable means to measure sphincter strength. Urethral hypermobility is a more difficult concept to define and defies a simple measurement. Currently, measurement of urethral hypermobility is best accomplished with a Q-tip test. Further, at present, there is no clear-cut relationship between urethral hypermobility and sphincteric urinary incontinence.

The urethral meatus is fixed to the undersurface of the pubis by the strong pubourethral ligament; the remainder of the urethra is supported by tissues of varying strength that may weaken with the ravages of time and stress. As visualized by

fast-scan magnetic resonance imaging and urethral ultrasound, there are at least three different kinds of urethral hypermobility. First, the entire proximal urethra may exhibit the classic rotational descent of type 2 stress incontinence. Second, the anterior wall of the urethra may remain fixed and the posterior wall pulled open, causing the urethra to funnel during stress. Finally, the whole proximal urethra may move forward and downward causing the urethra to shorten and widen (since it is fixed at the meatus). It is clear that, according to these formulations, depending on sphincter strength, any of these types of urethral hypermobility may or may not be associated with sphincteric incontinence.

The recommendation of this committee of one is that we put the term *intrinsic sphincter deficiency* on hold (since all patients with sphincteric incontinence have a weak sphincter) and simply describe stress incontinence by two parameters: the vesical and/or abdominal leak point pressure and the degree of hypermobility.

CLASSIFICATION OF STRESS INCONTINENCE

1. *Symptom:* Incontinence associated with physical activity
2. *Sign:* Demonstration of urethral incontinence during physical exertion such as cough or Valsalva maneuver
3. *Condition*
   a. *Sphincteric incontinence* (urinary incontinence that occurs in the absence of detrusor contraction). The leak point pressure and description of urethral hypermobility should be specified.
   b. *Stress hyperreflexia* (urinary incontinence during stress that is accompanied by an involuntary detrusor contraction)

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