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Non-surgical treatment for urodynamic stress incontinence (USI) and overactive bladder (OAB): Medication, physiotherapy, and biofeedback

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Abstract

Non-surgical treatment has few complication, does not compromise future surgery and should be available as an option to all USI women. Non-surgical treatment includes pharmacologic treatment, pelvic floor muscle exercises, biofeedback, electrical stimulation, and mechanical devices.

The urethral sphincter in women is composed of an internal sphincter and an external sphincter. Alpha-adrenergic agonists such as ephedrine, pseudoephedrine, phenylpropanolamine, and imipramine are widely used for the improvement of internal sphincter function, as the internal sphincter is alpha-adrenergically innervated. Since external sphincter is somatically innervated, no specific drug therapy is available, but pelvic floor muscle exercises, biofeedback, and electrical stimulation will help to enforce the function of the external sphincter. For motivated patients who are willing to pursue the rigors of long-term treatment, a reasonable degree of improvement can be expected.

Vaginal weight training (vaginal cone) is recommended for USI in premenopausal women (AHCPR, 1996). Traditionally, vaginal pessaries (mechanical devices) have been used to support and elevate the bladder neck and proximal urethra. Several pessaries that are specifically designed for treating USI, including an incontinence ring pessary, are now on the market.

The overactive bladder is a symptomatic diagnosis and has been defined as comprising the symptoms of frequency (> 8 micturitions/24 h), urgency and urge incontinence, occurring either singly or in combination, which are not explained by metabolic (e.g. diabetes) or local pathologic factors (e.g. UTI, stones, interstitial cystitis). Patients with an overactive bladder include those with and without a possible neurological cause for their symptoms. The overactive bladder is a chronic condition defined urodynamically as derusor overactivity, and characterized by involuntary bladder contractions during the filling phase of the micturition cycle. The involuntary contractions result in reduced functional bladder capacity and unpredictable, troublesome symptoms.

The non-surgical treatment for overactive bladder includes pharmacologic treatment, behavioral modification, pelvic floor exercises, bladder retraining, and electrical stimulation. Latest research shows that the optimal treatment is combined behavioral and pharmocological therapy.