

Chapter 19

Surgery for Urge Urinary Incontinence: Cystoplasty, Diversion

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Introduction and Indications for the Surgical Treatment of Urge Incontinence

Detrusor Overactivity

Detrusor overactivity (DO) is characterized by involuntary detrusor contractions during the filling phase and is associated with urgency or urge incontinence. Urge urinary incontinence (UUI) is the complaint of involuntary leakage accompanied by or immediately preceded by urgency [1]. Patients with severe DO are distressed by urinary incontinence and often are desperate for treatment. The vast majority of patients suffering from overactive bladder and UUI can be treated successfully using a combination of pharmacological therapy, behavioral management, and lifestyle adjustments. During the last decades the evolution in understanding the pathophysiology of the irritative-storage symptoms, along with the widespread adoption of urodynamics, have centered treatment on drugs that modulate the cholinergic control of detrusor contractions during the storage phase. This has resulted in competitive nonselective muscarinic antagonists having dominated the field of overactive bladder (OAB) treatment during the last few years.

Bladder training, pharmacotherapy, transcutaneous electrical nerve stimulation, or S3-neuromodulation and lately botulinum toxin type-A injections are considered to be the major contemporary treatment alternatives for OAB-related incontinence. Consequently, the treatment of the OAB-related urge

incontinence has to follow a stepwise fashion, starting with the minimal invasive and least harmful therapy and escalating to major surgery.

Surgical treatment for intractable nonneuropathic OAB incontinence therefore is reserved for those who have failed an adequate trial of these measures. However, resolution to surgery which may involve transposition of intestinal segments into the urinary tract (eg, augmentation enterocystoplasty) should be the outcome of adequate counseling and complete and thorough urological–urodynamic evaluation, given the associated risks and complications of these largely invasive surgical procedures.

Neurogenic Bladder Dysfunction

Neurogenic bladder dysfunction (NBD) usually is the result of congenital or acquired disorders including myelodysplasia, multiple sclerosis, detrusor hyperreflexia, spinal cord injury, sacral agenesis, cerebral palsy, and previous pelvic operations such as hysterectomy. In the context of NBD the clinical picture is complicated further by additional problems related to bladder overactivity, including detrusor contraction and varying degrees of bladder outflow obstruction [2].

NBD can present clinically in a number of ways including frequency, urgency, urinary incontinence, intermittency, urinary retention, or urinary tract infections. Before the era of clean intermittent self-catheterization (CISC) [3], many patients with NBD had their urine diverted by means of an ileal conduit when conservative measures failed.