

Overactive Bladder



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KEYWORDS

- Overactive bladder • Urinary incontinence
- Bladder botulinum toxin (Botox) injection • Anticholinergics
- Sacral neuromodulation

KEY POINTS

- Overactive bladder is a syndrome affecting millions of women worldwide and prevalence will increase as the population ages.
- Pelvic floor physical therapy or muscle retraining is considered first-line treatment and has demonstrated improvement in OAB symptoms when compared with no intervention with no adverse outcomes; however, more data are needed on long-term effectiveness.
- Anticholinergic therapy is currently a mainstay of therapy but is often discontinued due to side effects and inefficacy.
- Newer therapies such as intradetrusor injection of onabotulinum toxin and neuromodulation (via percutaneous tibial nerve and implanted direct sacral nerve stimulation) have shown promising results as viable treatment alternatives to anticholinergic therapy treatment for overactive bladder.
- Further research is needed to compare long-term efficacy, side effects/adverse events and cost-effectiveness of the multiple available treatment options for overactive bladder.

INTRODUCTION

Overactive bladder (OAB) is a syndrome defined by the International Continence Society as “urinary urgency, usually accompanied by frequency and nocturia, with or without urgency urinary incontinence (UI), in the absence of urinary tract infection (UTI) or other obvious pathology.” OAB occurs with or without incontinence, referred

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to as OAB (wet) and OAB (dry), respectively. Approximately two-thirds of patients reporting symptoms of urgency and frequency do not have concurrent incontinence (OAB dry), whereas one-third do experience incontinence with their symptoms (OAB wet).

Heterogeneity in symptoms and underreporting of symptoms by patients make the prevalence and incidence of overactive bladder difficult to establish. The NOBLE Program in 2001 used telephone surveys to ascertain the prevalence of OAB and found prevalence in the United States to be 16.9% in women, with slightly more than one-third of these women having incontinence associated with their OAB.¹ Prevalence of symptoms also increased with age. Another review showed a slighter higher rate of 18.6% for patients reporting these symptoms “often,” with 28.7% of the adult US population reporting occasional (“sometimes”) OAB symptoms.^{2,3}

With the increasing age of the population in the United States and the high prevalence of this condition, overactive bladder represents a condition with a large economic impact. Estimates indicate that the adult US population spent an additional \$24.9 billion per year to manage their urinary symptoms with much of this expenditure, in particular among institutionalized adults, related to incontinence products (eg, pads).² Estimates from more than 10 years ago indicate that women aged 60 to 80 are the largest growing segment of the population in the United States, so these estimates of costs are likely to increase significantly.

ETIOLOGY OF OVERACTIVE BLADDER

The cause of overactive bladder is not well understood but is thought to be multifactorial in nature. The lower urinary tract has 2 main functions: storage and elimination. A system of neurotransmitters through both autonomic and somatic pathways controls the balance between these 2 functions. Detrusor overactivity, defined by the International Continence Society as “involuntary detrusor contractions that may be spontaneous or provoked,” as observed on urodynamics,⁴ leads to overactive bladder, with or without incontinence. Approximately 90% of detrusor overactivity leading to symptoms of urgency and frequency with or without incontinence is idiopathic, without a recognizable etiology. However, a variety of neurologic, lower urinary tract anatomic abnormalities and other disorders can cause and/or exacerbate detrusor overactivity.

DIAGNOSIS OF OVERACTIVE BLADDER

Overactive bladder is a common condition that greatly impacts quality of life, and evaluation of the patient should start with an assessment of the degree to which the condition impacts the patient’s daily life. Standardized quality-of-life questionnaires are available for use in evaluation. Additionally, taking a thorough medical and surgical history and a complete review of medications is vital to understanding an individual patient’s experience with OAB.

Physical examination can elucidate underlying medical conditions contributing to symptoms. The examination should include a general physical examination, with special attention to the neurologic and pelvic examinations. Spinal cord segments S2 to S4 are involved in micturition and should be evaluated accordingly. Pelvic examination should assess for signs of atrophy, pelvic organ prolapse, pelvic floor muscle strength assessment, and any anatomic abnormalities, including urethral diverticulum.

Relevant laboratory testing includes urinalysis and possibly urine cytology if irritative bladder symptoms and significant microhematuria are present on urinalysis. UTI and

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