Case Study Activity: Managing Overactive Bladder in the Community Pharmacy
Answers to Interactive Questions and Resources

Case 1: Identifying Overactive Bladder

Activity Preview
Overactive bladder (OAB) affects approximately 33 million U.S. adults—with similar overall rates of at least 16% in men and women—who must cope with the urgent need to urinate. The prevalence of OAB increases with advancing age. However, about half of cases of OAB are found among individuals between 35 and 64 years of age and half among adults aged 65 years and older.

The International Urogynecological Association and International Continence Society (IUA/ICS) define OAB as “urinary urgency (except in the absence of sensory input), with or without urge incontinence, usually with frequency and nocturia” occurring in the absence of a known pathologic condition (uncommon) that may cause similar symptoms (e.g., urinary tract infection). OAB is diagnosed by patient symptoms, which result from an overactive detrusor muscle that contracts inappropriately during the bladder filling phase of the micturition cycle (i.e., bladder filling, storage, and emptying). While the terms OAB and urge urinary incontinence are sometimes used synonymously, it is noteworthy that 64% of patients with OAB are not incontinent of urine. Urinary urgency is the sudden compelling desire to urinate that is difficult to delay; subsequently, urine leakage may occur if the patient cannot reach the toilet quickly (e.g., within a couple of minutes). Urinary frequency is defined as urination more than eight times per day. Nocturia means having more than one micturition per night and/or nocturnal incontinence (enuresis). Depending on the degree of bladder emptying and the urine volume at the time of contraction, patients who are incontinent may lose a large amount of urine. Certain medications that affect urinary function (e.g., acetylcholinesterase inhibitors, diuretics, anticholinergic agents) may be related to the recent onset or worsening of OAB symptoms.

OAB, with or without urinary incontinence, has a significant detrimental effect on patients’ quality of life. Patients with OAB have the annoyance of symptoms, inferior health-related quality of life, and higher rates of depression, anxiety, and insomnia due to nocturia and the fear of enuresis compared with individuals who have normal bladder function. Urgency, frequency, and/or urinary incontinence or the fear of them cause patients to give up previously enjoyable social and physical pursuits, including sexual activity, potentially leading to social isolation, poor self-esteem, and dependence on others. Patients and their families also must deal with the high economic burden and related psychological impact of this condition. Furthermore, individuals
and society are negatively affected by decreased work productivity caused by OAB. Finally, OAB with incontinence is a major factor in nursing home admission.

Despite these consequences, most patients are reluctant to mention their OAB symptoms and as few as 15% of these patients seek or receive treatment for OAB from their primary care physician. Therefore, identifying OAB by patient queries and self-reporting of symptoms must be supplemented with surrogate measures of patient complaints or purchases of remedies for OAB and its complications; these measures may include inquiries about management of sleeping difficulty, purchase of extra-absorbent pads or clothing guards, and use of prescription or nonprescription sleep aids.

Community pharmacists are in a prime position to improve the management of OAB. Specifically, the pharmacist can pragmatically identify this condition, review a patient’s medication history for agents that can mimic or worsen OAB symptoms, dispel myths and educate patients about the disease, and advise patients about general treatment options. Pharmacists also can refer patients for a definitive diagnosis to rule out more serious conditions such as prostate cancer, provide patient education about the treatment plan, and monitor patient response and adherence at subsequent patient visits. Community pharmacists can recommend ongoing self-management such as lifestyle modifications and using a bladder diary to note treatment response.

The replacement or reduced use of medications that can aggravate OAB may decrease its symptoms. Lifestyle management involves eliminating or lessening known problematic dietary factors including consumption of caffeinated beverages, tomatoes and tomato-based products, spicy and acidic drinks and foods, citrus fruits and juices, foods and beverages containing artificial sweeteners, and chocolate. Habits such as the use of alcohol and smoking are discouraged, and weight loss is recommended for overweight individuals. Although some individuals decrease their fluid intake to reduce the urine volume, this tactic is not advised because drinking too little water (or other non-irritating liquids) can create highly concentrated urine that increases micturition frequency. Patients should be encouraged to drink 2 to 4 glasses of non-citrus beverages daily but no later than 3 or 4 hours before bedtime. While the presence of one or more of these potentially reversible factors may explain the patient’s symptoms, it does not preclude OAB or more serious pathology. Even though lifestyle modification is generally not curative, it can decrease symptoms and may enable the use of less intensive behavioral methods and pharmacotherapy.
Case Study

Patricia Miller is a 67-year-old woman who has been a patient at your pharmacy for several years. She asks you to recommend an over-the-counter (OTC) medication to help her sleep. Her problem began several months ago, and the lack of sleep has decreased her energy and pleasure in everyday activities and gardening. For the past 6 months or so, she is awakened from sleep once or twice a night by a sudden urge to urinate. While difficult to hold back, she has been able to avoid wetting the bed. Mrs. Miller also has trouble falling asleep and attributes this difficulty to anxiety about not getting to the bathroom in time during the night. During the daytime, she has to urinate about six times and wears a pad for fear of leaking urine and emitting its odor if she cannot get to a toilet in time. She reveals that she sometimes wets her pads. Because of this urinary problem, Mrs. Miller has stopped volunteering at the hospital and no longer participates in her hiking group. Her older sister told her that she has the same problem, and her doctor said not to worry because this is to be expected with aging; consequently, Mrs. Miller has not bothered to tell her physician about these symptoms.

Mrs. Miller currently takes chlorthalidone 25 mg for hypertension, potassium chloride 10 mEq for hypokalemia, levothyroxine 100 μg for hypothyroidism, simvastatin 20 mg for a lipid disorder, OTC aspirin 81 mg once daily in the morning, metoprolol tartrate 25 mg twice daily for hypertension, and acetaminophen 650 mg as needed up to three times a day for osteoarthritis pain. She has no known medication allergies. Additional health information in your pharmacy records indicate that she has no past history of neurologic disease, depression, sleep disturbances, urinary problems, urinary tract infections, atrophic urethritis or atrophic vaginitis, heart failure, edema, diabetes, pelvic cancer, or constipation. Mrs. Miller has never smoked and reports drinking one glass of wine before bedtime for the past 2 months to help her sleep.

Based on your findings, and in accordance with IUA/ICS criteria, you suspect that Mrs. Miller may have OAB.

OAB Lexicon

Overactive bladder is defined as urgency, with or without urgency incontinence, usually with frequency and nocturia.

- **Urgency**: the sudden, compelling need to urinate that is difficult to defer.  
- **Urgency incontinence**: involuntary leakage of urine accompanied or immediately preceded by urgency.  
- **Frequency**: urinating more than eight times during the day.  
- **Nocturia**: waking at night more than once to urinate.  
- **Enuresis**: nocturnal urinary incontinence.

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Answer to Question 1

1. According to IUA/ICS criteria, what symptom experienced by Mrs. Miller is consistent with the diagnosis of OAB?
   a. Urinary incontinence.
   b. **Urinary urgency.**
   c. Must arise during the night to urinate.
   d. Urinates six times during the day.

The correct answer is “b.” According to the IUA/IAC criteria, urinary urgency, regardless of the presence of other symptoms is diagnostic of overactive bladder.

- **Answer “a” is incorrect** because urinary incontinence alone does not establish a diagnosis of OAB. In addition, many patients who have OAB are continent.

- **Answer “c” is incorrect** because nocturia alone does not establish a diagnosis of OAB. In addition, nocturia is defined as more than one micturition during the night, and the number of nighttime micturitions is unspecified in this response.

- **Answer “d” is incorrect** because urinary frequency alone does not establish a diagnosis of OAB. In addition, urinary frequency is defined as micturition more than eight times per day.
You explain to Mrs. Miller that her symptoms suggest a common bladder condition. Additionally, you educate her that it is important for her to discuss her symptoms with her primary care physician because treatment can decrease her symptoms, improve her quality of life, prevent complications such as social isolation, and decrease her cost of incontinence pads. With no objections from Mrs. Miller, you advise that she visit her primary care physician and you send a summary of your concerns to the physician’s office.

**Answer to Question 2**

2. Mrs. Miller asks if there is anything she can do right now, before she can get an appointment to see her physician, to decrease her urinary symptoms. What would you recommend?
   a. Do nothing until you talk to your physician.
   b. Don’t drink more than one glass of water or other liquids each day.
   c. **Decrease or stop drinking caffeinated beverages.**
   d. Replace table sugar with an artificial sweetener.

The correct answer is “c”. Caffeine is proven to worsen OAB symptoms, and decreasing consumption of caffeinated products may reduce symptoms. Decreasing caffeine use is not associated with clinically meaningful harm.

- **Answer “a” is incorrect** because pharmacists can recommend lifestyle changes that are known to relieve various symptoms of OAB without evidence of harm.

- **Answer “b” is incorrect** because limiting the overall daily intake of water and other liquids can create highly concentrated urine that increases OAB micturition frequency, if present.

- **Answer “d” is incorrect** because artificial sweeteners are proven to worsen OAB symptoms.
Three weeks later, Mrs. Miller presents a prescription to you for an antimuscarinic medication for treatment of OAB and a prescription for lorazepam. She states that her OAB symptoms improved somewhat following your suggestions but they continue to bother her. However, she is hesitant to take the bladder medication, expressing concern about adverse effects and asking how much it will help her.

**Answer to Question 3**

3. In explaining the benefits—in addition to the risks—of OAB management, potential treatment benefits related to Mrs. Miller’s well-being include improvement in all of the following areas, except:
   a. Decreased insomnia.
   b. **Decreased anxiety.**
   c. Increased work productivity.
   d. **Decreased bladder pain.**

The correct answer is “d” because bladder pain is neither a symptom nor a quality-of-life issue of OAB.

- **Answers “a,” “b,” and “c” are incorrect** because treatment has been shown to improve these health-related quality-of-life conditions worsened by OAB.
Fast Facts About OAB

- 64% of patients with OAB do not suffer from urine incontinence.
- 48% of pharmacists surveyed said they would feel uncomfortable raising bladder control issues with patients.
- 40% of people with OAB do not mention their OAB symptoms to their health care provider.

Sources:


Resources


