OAB can have a significant negative impact on quality of life, including an increased risk of falls and fractures, as well as interference with social and physical activities and sleep. Psychosocial and physical well-being is often lower in OAB patients, as are interference with task completion, sleep, work-related activities, and sex and intimacy. Brown et al reported that in a cohort of 6,000 community-dwelling older women followed for 36 months, 35% of patients experienced at least one fall and 8.5% sustained a fracture. Multivariate analyses demonstrated that OAB was an independent risk factor for both falls and fractures. The risk to the toilet during urgency predisposed women to falls they would not otherwise have, and fractures were sustained that may not otherwise have occurred. Other factors that adversely affect QoL in OAB sufferers include depression, anxiety, interference with physical activity (with secondary weight gain), social isolation, sexual avoidance, and reduced workplace productivity.

Several studies have confirmed the negative impact of OAB, especially with urge incontinence, on sexual activity. Women with frequent urge incontinence report less sexual satisfaction. Scores in sexual QOL are lower in women with OAB than in age-matched controls. More than half of patients with idiopathic urge incontinence scored as “depressed” on validated questionnaires, with nearly 7% being diagnosed with major depression. Urgency incontinence was more highly associated with depression than was stress incontinence, likely due to the unpredictable nature of urge leakage.

Although women with OAB often avoid sexual activity, it is not usually due to pain, but rather due to urgency and incontinence. Dyspareunia is more typical of bladder pain syndrome and pelvic pain syndromes.

REFERENCES FOR QUESTION ONE:

REFERENCES FOR QUESTION TWO:

REFERENCES FOR QUESTION THREE:

REFERENCES FOR QUESTION FOUR:

LITERATURE CITED:

CONCLUDING MEDICAL EDUCATION PROJECT:
Overactive Bladder in Women
Craig G. Comiter, MD
Assistance Professor of Urology
Director FPMRS Fellowship
Stanford University

QUESTION 1:
In a woman who complains of bothersome frequency every hour in the day, and occasional urinary leakage, which of the following tests are helpful at the initial visit?
A. Urinalysis
B. Vaginal exam
C. Bladder diary
D. Ultrasound study
E. Voiding residual urine measurement

QUESTION 2:
In women with OAB, which of the following is an example of behavioral therapy?
A. Pessary to correct cystocele
B. Incontinence pads
C. Vaginal electromyography biofeedback training
D. Discussion of normal bladder and sphincter function
E. Pharmacotherapy on an “as needed” basis

QUESTION 3:
Which symptoms are considered typical for patients with overactive bladder?
A. Dysuria
B. Straining
C. Urge incontinence
D. Bladder pain
E. Frequency

QUESTION 4:
Factors that may exacerbate OAB symptoms include:
A. Dihuteks
B. Heart failure
C. Venous insufficiency
D. Constipation
E. All of the above

QUESTION 5:
OAB can adversely affect quality of life (QOL). Which of the following is not typically related to OAB?
A. Sleep disturbance
B. Social activity interference
C. Fall risk
D. Fracture risk
E. Pain with intercourse
**DISCUSSION OF QUESTION ONE**

A. **Urinalysis**

Urinalysis is absolutely indicated in the workup of overactive bladder (OAB), as the practitioner must rule out treatable causes of symptoms other than idiopathic OAB, defined as urgency, with or without incontinence, typically with frequency and nocturia. Pyuria, in the presence of OAB symptoms may indicate bacterial cystitis. Short course treatment with oral antibiotics would be indicated, but not to treat asymptomatic bacteriuria, as OAB may coexist with chronic but asymptomatic bacteriuria. Hematuria may be a sign of either upper or lower tract pathology. Transcranial collagen of the bladder can present with microhematuria and irritative lower urinary tract symptoms. If hematuria were noted, and persisted on repeat urinanalysis, therapy for an upper or lower tract source of bleeding would be indicated. An intravenous urrogram or CT scan of the kidneys and ureters would be suggested to rule out renal mass, or renal pelvic or ureteral tumor, and to assess for nephrolithiasis. A cystoscopic examination with urine cytology would be the test of choice for transitional cell carcinoma of the bladder. Glycosuria mellitus, a disease commonly associated with polyuria.

**DISCUSSION OF QUESTION TWO**

Behavioral interventions are strongly recommended as part of the initial treatment plan for OAB.

A. **Passyex to correct cystocele** (incorrect)

A pessary is a device used to support for prolapsed pelvic organ, or is occasionally used to support the bladder neck for the treatment of stress urinary incontinence. Device placement is outside the realm of behavioral therapy.

B. **Incontinence pads**

Incnicent pads are useful for collecting the urine in those with stress incontinence, urge incontinence, or mixed incontinence, but does not address the symptoms of overactive bladder.

C. **Vaginal electromyography biofeedback training** (incorrect)

Biofeedback is a teaching technique that helps patients learn by giving them precise, instantaneous feedback of their pelvic floor muscle activity. The original device designed by Kegel consisted of a pessicmeter. Most current biofeedback systems are computerized, with a visual monitor display. They are used to measure pelvic floor muscle activity by manometry or electronic, through vaginal probes or surface electrodes. Mean reductions of incontinence ranging from 68-80% have been achieved.

D. **Discussion of normal bladder and sphincter function** (correct)

Patient education is the most important aspect of behavioral therapy. Patients with overactive bladder symptoms may have little understanding of normal lower urinary tract function. Without an educational framework, explantation of normal bladder capacity and expected voided volume allows the patient to model his or her own behavior.

E. **Use of oxybutynin on an “as needed” basis** (incorrect)

The guiding principle of pharmacotherapy for treating OAB is inhibition of the uninhibited bladder contraction. Antimuscarinics are the preferred medications. Antimuscarinics may lead to the motor paradox, causing more bladder outlet obstruction. Devices, biofeedback and drug therapy, while non-surgical approaches to treat OAB and incontinence, are actually outside of standard behavioral therapy.

**DISCUSSION OF QUESTION THREE**

The history is the most important diagnostic tool in the initial evaluation of the patient with OAB – typified by symptoms of frequency, urgency (with or without incontinence), frequency, and nocturia. Screening for OAB is simple, accurate, and requires minimal time from a provider. Some questions that may be useful have been proposed by Newman and Givvaninni include symptoms suggestive of OAB.

Such symptoms are the items that the patient may be difficult to ignore. Measurement of frequency more than eight times in a 24-hour period? Uncontrollable urges to urinate that may result in wetting? Leakage of urine on the way to the bathroom? Need to awaken two or more times during the night to urinate? Avoidance of places that may not have a nearby restroom? Try to make sure you know where the bathroom is when in an unfamiliar place? Use of absorbent pads to protect your clothes?

The International Continence Society has proposed symptoms suggestive of overactive bladder. The presence of evaluation of the patient suspected to have overactive bladder is to: 1) identify transient, reversible causes; 2) exclude serious/progressive disease; 3) identify curable proximate causes; 4) classify the type of incontinence; and 5) identify a neurologic or other primary cause when present.

In most instances, the diagnosis of OAB is based upon symptoms assessment and physical examination, with urinalysis as the only mandatory laboratory test. Initiation of noninvasive therapy may then be indicated, in the absence of other treatable conditions such as infection, bladder stones, transitional cell carcinoma, bladder pain syndrome or diabetes. Certain medications can cause or exacerbate LUTS such as diuretics, narcotics, antidepressants, hypnotics, and anti-hypertensives.

During the patient interview, a neurologic history should be taken to explore the possibility of dementia, Parkinson disease, spinal cord injury or stenosis, multiple sclerosis, or stroke. Functional and cognitive evaluation of bladder outflow obstruction and gastrointestinal history is vital, because constipation may contribute to LUTS, and treatment for OAB may exacerbate constipation. Day, bladder emptying, and desire to void are important in the context of urinary symptoms. Excessive alcohol or caffeine intake may relate to LUTS in certain patients.

A history of prior surgery, especially genitourinary surgery (such as hysterectomy or incontinence surgery) is important to elicit. Urinary symptoms needs to be sought based on clinical suspicion, as recurrent or nocturnal fluid mobilization may contribute to polyuria and secondary frequency/urgency, or in the context of diabetes, when a diuretic is taken can strongly affect voiding behavior.

**DISCUSSION OF QUESTION FOUR**

A. **Sleep disturbances** (correct)

B. **Social activities interference** (correct)

C. **Fall risk** (correct)

D. **Fracture risk** (correct)

E. **Pain with intercourse** (correct)

OAB can adversely affect sleep, and increases the risk of falls and fractures. Patients with OAB will often avoid social activities and sexual encounters due to fear of incontinence or the need to void.

**DISCUSSION OF QUESTION FIVE**

A. **Erectile dysfunction**

B. **Urinary retention**

C. **Urinary tract infection**

D. **Bladder stone**

E. **Bacterial cystitis**

*Urgency*: a sudden compelling desire to void that is difficult to defer.

*Nocturna*: The patient complains that she has to awaken during the night at least once (but possibly more than once) to pass urine.
**ACTIVITY TITLE:** Overactive Bladder in Women  
**DATES VALID:** 2011  
**CREDITS AVAILABLE:** 1 Category 2B, AOA; 1 Category 1 AMA PRA™

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