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Case Study

A Journey to Continence: A Case Study of Overactive Bladder Syndrome

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Urinary incontinence continues to affect approximately 20% of adult women in the United States (Newman, 2002). This incontinence may be due to an overactive bladder syndrome (urgency, with or without urge incontinence, usually with frequency and nocturia), stress incontinence, or a combination of both (Sand & Dmochowski, 2002). The Center for Women in Bismarck, ND, surveyed its population recently and derived similar information about needed continence care; there are many continence treatment options available to these women if offered. The needs of the population were acknowledged by gynecologists and health care staff at the Center for Women; subsequently, the Continence Management Center was developed, the only one of its kind in ND. It offers evaluation, behavioral therapies, medical interventions, urodynamic testing, and surgical options. Continence management referrals are accepted from a multi-state area as information about the program has grown.

Anna, a 64-year-old white female, was referred by her internist for treatment of unresolved urinary frequency, urgency, and incontinence. She stated, “When I get the urge, I need to go now; that is my problem. I know I drink a lot of water.” These urinary symptoms caused her difficulties with daily living as well as embarrassment. Her problem was familiar to the Continence Management Center. Anna’s willingness and fortitude to regain urinary control were sparked when she started seeing positive change that was a result of her treatment at the Center. This case study describes specific interdisciplinary interventions prescribed over time to return Anna to continence.

CLINICAL ASSESSMENT

Anna was currently taking trospium chloride (Sanctura®) 20 mg daily and had used oxybutynin chloride (Ditropan XL®) 10 mg, but neither medication effectively improved her urinary symptoms. She was incontinent on a daily basis (ranging from wetting her underwear to soiling her outerwear) and was using 4 to 5 thin Poise® pads daily. She did not experience incontinence during the night but got up 1 to 2 times to void. Stress urinary incontinence was not a problem unless her bladder was “very full.” She felt that she usually emptied her bladder, but urgency recurred shortly after emptying at times. She had no problem starting her urinary flow and denied symptoms of prolapse or straining with bowel movements. Anna had never been pregnant. She had no history of pelvic or abdominal surgeries. Menopause occurred at about 50 years of age, and she used an estrogen and progesterone supplement until 1½ years ago. There was no history of urinary tract infections. She also reported hypertension that was controlled on medication, mild gastroesophageal reflux, treatment for osteoporosis, and mild depression. Her prescribed medications included amlodipine besylate (Norvasc®) 10 mg, esomeprazole magnesium (Nexium®) 40 mg, venlafaxine hydrochloride (Effexor XR®) 150 mg, celecoxib (Celebrex®) 200 mg, trospium (Sanctura®) 20 mg, and teriparatide (Forteo®) injections, and aspirin (Halfprin®). Herbal medications included flax seed, garlic, red rice yeast, multiple vitamin, and folic acid. Anna drank 14 glasses of water daily and an occasional cup of caffeinated coffee.

Key Words: Overactive bladder syndrome, stress incontinence, urge incontinence, nocturia, urinary frequency, bladder diary.
Anna is retired after working 38 years in an office. She has been happily married for many years; she and her husband enjoy traveling but have had to curtail this because of her incontinence problems. She does not smoke. A workout at a local gym is performed on a daily basis.

EXAMINATION
A post-void residual (PVR) was performed to rule out the symptom of incomplete emptying. She voided 350 mls with a PVR of 20 mls. Catheterized urinalysis and culture were normal.

There was no cracking or lesions on the external genitalia. Atrophic changes were noted at the vaginal introitus and urethral meatus (Kelley, 2007; Notelovitz, 1997).

No protrusion into the anterior or posterior vaginal vault was observed with Valsalva. Checking for pelvic floor strength, she was graded a 2/5 (Brink, Well, Sampsel, Tallie, & Mayer, 1994) with a contraction hold time of 8 seconds initially, but decreasing contraction hold time was noted on repeated maneuvers. With pelvic floor muscle fatigue, she substituted abdominal muscles, but she corrected this with coaching. She was able to perform quick flicks of the pelvic floor muscles. The anatomy of the pelvic floor and bladder function were discussed.

TREATMENT
Anna was asked to keep a bladder diary for three days (Fantil et al., 1996). She was advised of foods and fluids that could irritate her bladder as contained in a dietary guideline (Newman, 2002). She was also advised to space her fluids evenly throughout the day and take calcium glycerophosphate (Prelief®) before any irritants. Instructions on pelvic floor exercises (PMEs) were given. She was to perform these three times a day, 10 in a row, starting with a three-second hold time. As endurance improved, she gradually was to increase this hold time to a 10 count. Urge control techniques to retrain the bladder were discussed in detail. She was advised, take slow deep breaths, perform quick flicks of the pelvic floor muscle, and use distraction techniques until the urge subsided (Newman, 2002). Information regarding a vaginal estrogen supplement was sent home with her to review. A recheck appointment was made to evaluate her bladder diary and discuss a change in her anticholinergic therapy as well as the addition of a vaginal estrogen (Suckling, Lethaby, & Kennedy, 2006).

CONTINUED CLINICAL INTERACTIONS
Two-Week Recheck
On return, Anna’s bladder diaries revealed 14 to 15 voids per day, 15 to 17 glasses (8-ounce) of fluid per day, with loss of urine a couple of times a day. She had not been performing her PMEs or using the urge control technique regularly.

She was advised to reduce her fluid intake to 10 glasses of fluid daily. The gynecologist prescribed estradiol (Vagifem®) tablets to use every night for two weeks, then twice per week. She was re-instructed in her PMEs and encouraged to perform them three times a day. The urge control techniques were reviewed, and she promised to use them on a regular basis.

Two-Month Recheck
Anna reports she is better. She continues to have urgency at times and is awakening 0 to 1 times at night as compared to 1 to 2 times initially. She has minimal leakage and rarely needs to change her panty liner during the day. Sanctura 20 mg daily is tolerated with no side effects. Vagifem tablets twice a week have helped her vaginal irritation, and she has noticed a decrease in vaginal dryness. Anna has reduced her fluid intake to 10 to 11 glasses of water per day. She has been using her urge control techniques and performing her PMEs. These techniques have been helping her, and she now has a 10-second contraction hold time. She feels she is seeing some positive change.

After consulting with her physician, Sanctura was increased to twice daily to decrease the urgency that she was still experiencing. The following modifications were made in her urge control techniques. If the urge was “uncontrollable” when preparing to void, she should put the lid down on the toilet, sit, and perform the quick flick technique until the urge had passed, then void. When driving into the garage, sit in the car for a minute and use the urge control to prepare the bladder before entering the house. Anna was instructed to continue her PMEs and recheck in two months to evaluate her progress.

Five-Month Recheck
At the five-month recheck, Anna was much better. Her panty liners were almost always dry. She still experienced urgency at times and awakened once at night, but this occurred “less and less often.” She was losing a small amount of urine (less than one time a week) and reported that this “was a big improvement.” She was taking Sanctura as prescribed and more faithfully performing her PMEs. The urge technique worked quite successfully most of the time, and the vaginal dryness had greatly improved on the Vagifem tablets.

After examination by her gynecologist, Anna was prescribed medroxyprogesterone acetate (Provera®) to use for 10 days (Nothnagle & Taylor, 2004). This was to ensure that there was not a buildup of the endometrial lining while on Vagifem (Pinkerton, 2006). Since Anna’s urgency was still present while on Sanctura, she was changed to darifenacin hydrobromide (Enablex®) 7.5 mg daily after consulting with her physician. She was to call in a couple of weeks to report her response to this new anticholinergic because the dose could be increased if needed. She was again encouraged to perform her PMEs and use urge control tech-
niques. She had a good understanding of her program and was pleased with her results.

14-Month Phone Consult
Anna called the Center stating that her bladder problems had recurred. Enablex was increased to 15 mg daily. She reported having episodes of urgency and incontinence even when using the medication and her retraining techniques. She had been watching her fluid intake and had not been overhydrating. A referral to physical therapy for additional pelvic exercise instruction had been discussed during her previous visits, but she felt she could manage this on her own. Now, she was in agreement that seeing the physical therapist for instruction in Beyond Kegels was necessary (Hulme, 1997).

16-Month Phone Consult
Anna called stating she had completed her physical therapy program. She still had problems with urgency but was rarely continent. The urge was very strong and would occur in situations that were embarrassing to her. The conversation was relayed to her physician, and urodynamic testing was ordered to determine the exact cause of her continued symptoms. There are different types of incontinence, and treatment choices must be specific to the cause—stress versus urgency (Ostergard, Bent, & Weinberger, 1996). She had been very compliant with her continence program; however, she continued to have problems that interfered with her daily living.

CLINICAL ASSESSMENT
Anna was seen in the office; it had been 11 months since she had last been assessed. An updated history was obtained; her health status had remained unchanged. She was drinking 8 glasses of water and 1 glass of juice daily. She continued to have a “strong, sudden urge” and was continent of a small amount of urine daily (2 to 3 pads). On rare occasions, she had experienced complete involuntary emptying of her bladder. Sometimes, she was totally unable to delay the need to urinate and awakened once at night to void. Anna was very bothered by her continuing problem with urgency and how it affected her life.

URODYNAMICS
Testing during the filling phase showed that Anna's bladder demonstrated large detrusor contractions, up to 70 cm/H2O, with no fluid loss when she used her urge suppression techniques. There was a small amount of fluid loss with Valsalva when her bladder was full. Uroflowmetry was normal.

TREATMENT
Following testing and consultation with her physician, Enablex 15 mg was continued, and Sanctura 20 mg at bedtime was added. It was agreed that medications and conservative therapies were not controlling her bladder contractions. She was given information about InterStim® neuromodulation (Medtronic) (Daneshgari, 2006; Leng & Morrisroe, 2006), and botulinum toxin (Botox®) injections into the bladder were discussed briefly (Smith & Chancellor, 2004).

CONTINUOUS CLINICAL INTERACTIONS
16.5 Month Recheck
In spite of the anticholinergic medications, urgency and incontinence continued while voiding 8 to 10 times a day and 1 to 2 times at night. Anna had been very dedicated to her PME program and performed the urge control techniques faithfully. “Using all my willpower,” she remained dry most of the time in spite of the powerful contractions. A PVR of 51 mls of urine was obtained after voiding 200 mls. Again, further treatment options were discussed, and she decided to pursue InterStim therapy.

17-Month Phone Consult
Anna and her husband jointly agreed that the InterStim procedure was the needed treatment for her bladder problem. She had met all criteria, which included completing conservative therapies and failing treatment with several anticholinergic medications.

INTERSTIM TREATMENT
Anna had the InterStim Stage I procedure followed by the implant. She reported a 50% reduction in her episodes of urgency but experienced problems with uncomfortable stimulation. Multiple attempts were made at reprogramming but appropriate stimulation did not occur. She was happy with the decreased urgency, so she opted for a revision. This was successfully performed and she achieved excellent stimulation without discomfort.

CLINICAL RESULTS
Today, Anna is a new woman. She is voiding 6 to 7 times a day and is dry. She no longer wears pads and is not bothered by urgency. She and her husband travel when and where they choose without concern for the nearest bathroom. Grateful and happy, Anna has made herself available to the public by sharing her successful continence story at a public forum, co-starring in a television interview for a local news station and being interviewed for a newspaper article.

CONCLUSION
Anna’s treatment for her overactive bladder syndrome was successful. The Continence Management Center followed the recommendations of the Managing Acute and Chronic Urinary Incontinence Clinical Practice Guideline (Fantil et al., 1996) and urology publications. Beginning with a good history and appropriate conservative therapies, many patients experience a decrease or resolution of their bladder symptoms. More invasive therapies, such as InterStim, may be needed if symptoms persist and interfere.
with quality of life. Continence care can be developed and implemented in any clinical setting; all that is needed is a knowledgeable, motivated nurse and supportive health care professionals.

References