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FEMALE INCONTINENCE REVIEW

HOW COMMON IS INCONTINENCE?

Incontinence affects approximately 10 million Americans, without regard of sex and age. That means one out of every 25 American suffer from some type of incontinence.

WHY SEEK HELP?

Besides the social stigma of embarrassing odor and wetness, skin may be damaged by urine. With the technology of the 90s, most incontinence can be treated or at least managed to allow full participation in a satisfactory life-style.

DEFINITIONS

Incontinence can be simply defined as the unwanted loss of urine. There are actually many types of incontinence, and for successful treatment the type of incontinence must be defined properly.

The three major types of incontinence are urge incontinence, stress incontinence and overflow incontinence.

URGENCY INCONTINENCE

Urgency incontinence is the unwanted loss of urine that is usually associated with an abrupt and very strong urge to urinate. Urgency incontinence is often seen in people with nerve damage, particularly of the spinal cord in diseases like multiple sclerosis. The other main cause for urgency incontinence is the presence of some irritating force within the urinary tract that causes the patient to lose his urine involuntarily. This could be any type of infection of the bladder, prostate, or urethra. This would include such diagnoses as Prostatitis and various forms of cystitis or bladder inflammation. This could also be seen in bladder wall-damaged patients such as those who had received radiation therapy. The treatment of urgency incontinence is directed at the causative factors. If the urgency incontinence is caused by nerve damage for any reason, drugs are used to suppress the urge to urinate. If the cause of the urgency incontinence is any one of the irritating forces, then trying to relieve the bladder with medication or, of course, trying to treat the cause of the urination if it is treatable. In some circumstances such as radiation-damaged bladder the radiation cannot be undone, but the bladder can often be relaxed by using medications that decrease the amount of bladder sensitivity.

STRESS INCONTINENCE

Stress incontinence is the unwanted loss of urine that occurs during periods of activity such as coughing, sneezing, laughing, or running. This is often seen in women who have had multiple children, and this type of incontinence can be treated surgically, or with some forms of biofeedback teaching. In men, stress incontinence is rare because the prostate provides a major blockage of urine in most men, which gives sphincter is often left somewhat shortened in the attempt to remove all of the cancer. These men may have stress incontinence and may need to wear pads or diapers on a continuing basis. Some drugs such as Ephedrine and Sudafed can often be used to help increase the tone of the remaining sphincter. Doing exercises need to be done on a frequent and continuing basis to keep to keep the muscle tone at its maximum. Women often use this exercise as well after pregnancy. In men after radical prostate surgery with continuing incontinence, surgeons can place an artificial sphincter around the urinary channel downstream from the normal sphincter in an attempt to aid in controlling the urine. The surgery has fairly high success rate, but should not be considered until the patient has been incontinent for at least a year to ensure that spontaneous return of function will not occur. Sometime in the next twelve months we are

hopeful to have available collagen injections that can be placed outside the sphincter to help strengthen its presence, and this might be an easier solution in some patients for the treatment of stress incontinence.

OVERFLOW INCONTINENCE

Overflow incontinence is the unwanted loss of urine that is associated with an over-distended or un-emptying bladder. Most people present with a frequent or constant dribbling of urine, and may have some components of urgency incontinence and stress incontinence as well. Overflow incontinence is usually due to either a blockage of the outflow of the urinary tract such as an enlarged prostate from either benign prostate enlargement or prostate cancer. The overflow incontinence can also be due to an under-active or poorly contracting bladder, which does not sense the filling of urine. Nerve damage, particularly those which give the patient little sensitivity of filling of urine such as multiple sclerosis and in some diabetics, the treatment is difficult and may require continuous catheterization or patient self-catheterization programs. If the overflow incontinence is caused by a blockage such as a large prostate or prostate cancer, these diseases can be treated by surgery or medications, and in many over a period of time with a catheter or with intermittent catheterization bladder tone will return.

EVALUATION

Many times the various types of incontinence present together making the diagnosis somewhat more difficult. The basic evaluation of the patient with incontinence should include a complete history and physical examination with a urinalysis. A good history should include the exact characteristics of the periods of incontinence and the voiding patterns of the patient. A list of precipitating factors and list of all the important urinary tract symptoms should be included. Because the bladder has the same nerve roots as the bowel and sexual functioning, these should also be included in the history. An exact number of the use of pads, both amount and type, should be included, and any previous treatments for incontinence should be included as well. See the list below about the things that we need to know.

We may ask you to keep a chart of your voiding pattern to help us make a firm diagnosis or to help us with treatment to see how successful we are in treating your condition:

- * When do you go to the bathroom and how much? (Use an old jar to measure.)
- * When do you experience wetness? During or after lifting? While coughing, sneezing, or straining?
Day, night, or both? Before or after going to the bathroom?
- * How much urine do you lose? Estimate amounts in teaspoons, tablespoons, or parts of a cup.
- * Do you have trouble stopping or starting the flow of urine?
- * What is your daily fluid intake? (Amount and description of what you drink.)
- * Be prepared to name the medications you take and any surgery you have had on your urinary tract or around it. When you have this information ready, it is easier for the doctor to proceed with an evaluation.
- * If you have had previous treatment for incontinence, bring those records or X-rays with you.

Physical examination should include a complete abdominal and genital exam, a pelvic examination and a rectal exam is necessary both to look for masses and test the nerve function of the muscles of the perirectal area. Additional testing that is often helpful is a measurement of the amount of urine left in the bladder after voiding, and in some patients a rate of urinary flow. A urinalysis must be done looking for any signs of infection. In some patients a detailed voiding record that measures time and amounts of urine over a one to two day period can be quite helpful. In some patients more specialized tests are indicated, including x-ray evaluation of the kidneys, ureters, bladder and urethra. A telescopic examination of the urethra, the sphincter area, bladder and in men the prostate is often necessary to make access the physical and anatomic characteristics of these organs. In many patients various forms of cystometry is necessary. There are various forms of cystometry, including the cystometrogram, which is a measure of pressure within the bladder. This can often be aided by EMG studies or electromyography, which measures the muscles around the anus and bladder neck, and also video studies of voiding for identification of complex problems, particularly lack of coordination of the various muscles necessary to achieve adequate urination.

WHAT WILL BE DONE?

As discussed above incontinence has many different causes. The diagnosis will point to the treatment or management that is best for you. Some of the possible treatments are muscle strengthening, electronic stimulation, medicine, surgery, injections of collagen into the sphincter to increase tone, periodic catheterization, external collectors, and absorbent products. Each treatment is personalized to you needs and diagnosis. Often, multiple treatment options for each situation will exist and it will be up to the patient, with their Urologist's help to select the best first option to try.

FEMALE INCONTINENCE

Steven L. Jensen, MD

I. Definition

* Urinary incontinence is the involuntary loss of urine through the urethra severe enough to be of *social* or *hygienic* consequences.

II. Incidence

- * 10 million American females
- * 37% of women over 50 years of age
- * 50% of women in nursing homes
- * Annual cost of 10 billion dollars

III. Classification of Incontinence

- * Urge Incontinence
- * Overflow Incontinence
- * Stress Incontinence - 27%
 - Type I (minimal hypermobility)
 - Type II (marked hypermobility)
 - Type III (Intrinsic sphincter dysfunction)
- * Mixed Incontinence (Urge and Stress Incontinence) - 57%

A. Urge Incontinence

- * Instability
 - Infection
 - CVA
 - Multiple Sclerosis
 - Spinal Cord Injury
- * Poor Compliance / Small Capacity
 - Pelvic nerve injury
 - Radiation
 - Bladder muscle fibrosis

B. Overflow Incontinence

- * Outlet obstruction
- * Diabetes
- * Tabes dorsalis (sensory neuropathy)

C. Stress Incontinence

- * Types I - III
- * 90% - 95% of SUI related to anatomic etiology
 - Pelvic floor relaxation and hypermobility
- * May be associated with:
 - Cystocele
 - Enterocele
 - Rectocele

IV. Evaluation

- * History
 - What causes leaking?
 - Coughing / Laughing
 - Running / exercise
 - Hears water running
 - Unable to make it to the bathroom
 - How much do they leak?
 - Number of pads / day
 - Change in lifestyle
 - Past medical history
 - Pregnancies
 - Surgeries
 - Injuries
- * Physical examination
 - Pelvic exam (cystocele)
 - Neurologic exam
- * Studies
 - PVR
 - Urinalysis
 - Q Tip test
 - Marshall test
 - CMG / EMG
 - Leak Point Pressures (LPP)
 - Uroflowmetry
 - Cystoscopy
 - Video urodynamics

V. Treatment

A. Urge Incontinence

- Voiding log
- Kegels
- Timed voiding
- Fluid restriction
- Medication
 - Ditropan (anticholinergics)
 - Imipramine
 - Estrogen
- Surgery (cystoplasty) - Rare

B. Overflow Incontinence

- Timed voiding
- CIC

C. Stress Incontinence

- Kegels
- Timed voiding
- Fluid restriction
- Biofeedback
- Medication
 - Estrogens
 - Alpha agonist (Dexatrim, Sudafed)
- Surgery
 - Abdominal suspensions
 - * MMK
 - * Burch
 - Transvaginal suspensions
 - * Raz
 - * Stamey
 - * Gittes
 - Combination (Slings)
 - * Rectus Fascial Sling
 - * Raz Vaginal Wall Sling
 - Collagen Injection
 - Artificial Urinary Sphincter
 - Intraurethral Devices