

## URINARY INCONTINENCE

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### Introduction

Urinary incontinence is a sudden accidentally leak of urine. Involuntary unpredictable expulsion of urine from the bladder and is encountered in several temporary and permanent conditions.

The prevalence of incontinence is 1.5% to 5% in men and 10%-25% in adult women under the age of 65 yrs. Urinary incontinence affects about 33% of women and 20% of men over the age of 60 years who are non institutionalized. For people who are institutionalized, the incidence increases to 50%. It is estimated that more than 15 billion / year are spent managing patient with incontinence.

Female urinary incontinence is reported at 38% increasing with age from 20-30% during young adult life to almost 50% in elderly. Many people believe that urinary incontinence is a normal part of aging when in fact it's not. Others may be embarrassed to talk about incontinence with a health care professional. For these reasons, many people don't seek medical help and never get properly diagnosed or treated. In many leads, urinary incontinence can be cured, or at least significantly relieved.

Urinary Incontinence is traditionally been viewed as social /hygienic problem, it is now known to affect quality of life as well as contributes to serious health problems in older adults.

### Classification of Urinary incontinence.

- **Stress Incontinence:** In this type of urinary incontinence urine leaks due to weakened pelvic floor muscles and tissues. This usually occurs when pressure on bladder increases, such as performing activities like exercise, laugh, sneeze, or cough. This type of incontinence is the involuntary loss of
- **Urge Incontinence:** This is also called overactive bladder (OAB). With this type, there is urgent need to go to the bathroom and may not get there in time. This type of incontinence is characterized by losing a considerable amount of urine for no apparent reason after feeling a sudden, urgent need to void.
- **Mixed Urinary Incontinence:** In this there are two types of the condition. Majority of the women have both stress and urge incontinence, this most often involves characteristics of both stress and urge incontinence.
- **Neuropathic incontinence:** This type of incontinence will vary depending on nerve lesion. Neurological conditions affect the body's nervous system, damage to the brain, spinal cord or other nerves. The nervous system plays an important role in regulating the storage of urine in the bladder and coordinating and controlling passage of urine. Damage to the nervous system may cause problems that affect the lower urinary tract.
- **Congenital incontinence:** This type of incontinence occurs due to presence of ectopic uterus, exstrophy or cloacal malformation.
- **Overflow Incontinence:** Incomplete emptying the bladder is mainly due to overflow incontinence. This usually

urine associated with activities that increase physical stress and pressure in the abdomen and bladder.

exhibits as involuntary dribbling of urine. Affected person won't sense that your bladder is full and will lose urine without noticing it, he also may feel as though bladder is never empty.

- **Functional Incontinence:** Mental or physical problems such as dementia or arthritis prevent person from getting to the bathroom in time. This type doesn't involve problems with the urinary system, muscles or nerves. Instead, it occurs when a person is unable to reach the bathroom in time to urinate because of physical or mental limitations.
- **Total Incontinence:** It is the complete loss of urinary control. Due to presence of vesico-vaginal fistula, suffered spinal cord injuries, multiple sclerosis or another disorder that affects nerve function.
- **Transient Incontinence:** This is a temporary form of incontinence usually caused by short lived medication or treatment such as conditions like severe constipation, inflamed bladder/ vagina, recovery from surgery etc.

**Risk factors for urinary incontinence:** The following are risk factors linked to urinary incontinence:

- **Obesity:** Obese people have increased pressure on their bladder and surrounding muscles, which weakens the muscles and makes it more likely that a leak occurs when the person sneezes or coughs.
- **Smoking:** Regular smokers are more likely to develop a chronic cough, which may result in episodes of incontinence
- **Alcohol:** Causes dehydration by increasing amount of urine and it interfere with brain signal to the bladder when to release the urine.
- **Gender:** Women have a significantly higher chance of experiencing stress incontinence than men, especially if they have had

children. After menopause, women produce less estrogen, which may contribute to incontinence.

- **Old age:** The muscles in the bladder and urethra weaken during old age
- **Some diseases and conditions:** People with diabetes, kidney disease, spinal cord injury, or neurologic diseases. (in particular, residual deficits after a stroke)
- **Prostate disease:** Patients with a history of prostate surgery or radiation therapy.

#### **Causes:**

- **Causes of stress incontinence:** The causes are pregnancy, menopause (when estrogen levels drop the muscles may get weaker), a hysterectomy (surgical removal of the uterus), some other surgical procedures, age, and obesity.
- **Causes of urge incontinence:** The following causes of urge incontinence have been identified - cystitis, CNS problems (like multiple sclerosis, stroke, and Parkinson's disease), an enlarged prostate ( the bladder may drop).
- **Causes of overflow incontinence:** This happens when there is an obstruction or blockage to the bladder. The following may cause an obstruction are an enlarged prostate gland, a tumor pressing against the bladder, urinary stones, **constipation**, urinary incontinence surgery etc.
- **Causes of total incontinence:** An anatomical defect the person has had from birth, a spinal cord injury which messes up the nerve signals between the brain and the bladder, a fistula - a tube (channel) develops between the bladder and a nearby area, most typically the vagina.
- **Other causes of urinary incontinence:** Some medications - especially some diuretics, antihypertensive drugs, sleeping tablets, sedatives, and muscle relaxants.

## Management

1. **Medical management :** Medications commonly used to treat incontinence include:

- **Anticholinergics:** These medications can calm an overactive bladder and may be helpful for urge incontinence. Examples include oxybutynin (Ditropan XL), tolterodine (Detrol), darifenacin (Enablex), fesoterodine (Toviaz), solifenacin (Vesicare) and trospium (Sanctura).
- **Mirabegron: (Myrbetriq)** Used to treat urge incontinence, this medication relaxes the bladder muscle and can increase the amount of urine your bladder can hold. It may also increase the amount you are able to urinate at one time, helping to empty your bladder more completely.
- **Alpha blockers:** In men with urge or overflow incontinence, these medications relax bladder neck muscles and muscle fibers in the prostate and make it easier to empty the bladder. Examples include Tamsulosin (Flomax), Alfuzosin (Uroxatral), Silodosin (Rapaflo), Terazosin (Hytrin) and Doxazosin (Cardura).
- **Topical estrogen:** Applying low-dose, topical estrogen in the form of a vaginal cream, ring or patch may help tone and rejuvenate tissues in the urethra and vaginal areas. This may reduce some of the symptoms of incontinence.

## 2. Other measures:

- a. **Cystoscopy:** A cystoscopy is a medical procedure used to examine the inside of the bladder using an instrument called a cystoscope. A cystoscope is a thin, fibre optic tube that has a light and a camera at one end. It's inserted into the urethra (the tube that carries urine out of the body) and moved up into the bladder.
- b. **Urodynamic testing:** Urodynamic tests help doctors to assess the function of the

bladder and the tube from bladder that passes out urine (i.e bladder outflow tract, or urethra). They are usually done to investigate urinary incontinence in women. During the tests, bladder is filled and then emptied while pressure readings are taken from your bladder and the tummy (abdomen). The idea is to replicate the symptoms, then examine them and determine their cause.

- c. **Nerve stimulation:** This can be offered when medicines or botulinum, toxin, if it does not work or if person don't want this treatment, there are two type i.e

**\*Sacral nerve stimulator:** Implanted under the skin of the patient's buttock. A wire connects it to a nerve that runs from the spinal cord to the bladder. The wire emits an electrical pulse that stimulates the nerve, helping bladder control.

**\* Peroneal nerve stimulation:** This is also a way of stimulating the nerves that controls the bladder.

- d. **Bladder training (bladder drill)/ behavioral modification:** The aim is to slowly stretch the bladder so that it can hold larger and larger volumes of urine. In time, the bladder muscle (detrusor) should become less overactive and you should become more in control of your bladder. This means that more time can elapse between feeling the desire to pass urine and having to get to a toilet. Leaks of urine are then less likely.
- e. **Pelvic floor exercises:** Many people have a mixture of Over Active Bladder (OAB) syndrome and stress incontinence. Pelvic floor exercises are the main treatment for stress, urge and mixed incontinence This treatment involves exercises to strengthen the muscles that wrap underneath the bladder, womb (uterus) and rectum.
- f. **Biofeedback:** Has been proven effective in the treatment of urinary incontinence in

numerous research studies. It can be used to help women learn to control and strengthen the pelvic floor muscles. Biofeedback therapy uses computer graphs and audible tones to show the muscles that are exercising. It also allows the therapist to measure muscle strength and individualize exercise program.

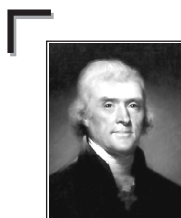
**3. Surgical intervention:** Depending on the type of urinary incontinence the treatment modalities will vary. Procedures that may be used include:

- **Augmentation cystoplasty:** In this operation, a small piece of tissue from the intestine is added to the wall of the bladder to increase the size of the bladder. However, not all people can pass urine normally after this operation. It may require inserting a catheter into your bladder in order to empty it. The operation is sometimes done by opening the abdomen and sometimes through an operating telescope (laparoscope).
- **Urinary diversion:** In this operation, the tubes from the kidneys to the bladder (the ureters) are routed directly to the outside of your body. There are various ways that this may be done. Urine does not flow into the bladder. This procedure is only done if all other options have failed to treat OAB syndrome.
- **Sling procedures:** A mesh is inserted under the neck of the bladder to help support the urethra and stop urine from leaking out.
- **Colpo suspension:** The bladder neck is lifted. The procedure can help patients with stress incontinence.

- **Artificial sphincter:** An artificial sphincter (valve) may be inserted to control the flow of urine from the bladder into the urethra.

## References

- Mohan, F. D., Sandas, J. K., Neighbors, M., (2007) *Medical Surgical Nursing Health and illness perspective*. 8<sup>th</sup> ed. New Delhi: Mosby Elsevier publication.
- Bodhare, T. N., Valsangkar, S., Bele, S. D., (2010) An epidemiological study of urinary incontinence and its impact on quality of life among women aged 35 years and above in a rural area. *Indian J Urol*. Jul-Sep; 26(3): 353–8.
- Tanagho, E. A., McAninch, W. J., Smiths (2011) *General Urology*. 17<sup>th</sup> ed. Tata McGraw Hill Education Private Limited; New Delhi.
- Singh, U. , Agarwal, P., Verma, L. M., Dalela, D., Singh, N., Shankhwar, P. (2013) Prevalence and risk factors of urinary incontinence in Indian women: A hospital-based survey. *Ind jour of urology*: 29;(31-36).
- Priscilla, L., Karen, B. M. (2000) *Medical Surgical Nursing Critical thinking in client care*. 2<sup>nd</sup> ed. Upper Saddle River: New Jersey publication.
- Hinkk, J. L., Cheever, K. H. (2014) *Brunner and Suddarths Medical Surgical Nursing*. 13<sup>th</sup> ed. New Delhi :Wolters Kluwer Publication.



"Nothing can stop the man with the right mental attitude from achieving his goal; nothing on earth can help the man with the wrong mental attitude." - Thomas Jefferson