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FACULTY OF NURSING



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Urinary Incontinence

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Definition

- **Urinary incontinence (UI)** is any involuntary leakage of urine. It is a common and distressing problem, which may have a profound impact on quality of life.

Physiology of continence

- Continence and micturition involve a balance between urethral closure and detrusor muscle activity. Urethral pressure normally exceeds bladder pressure, resulting in urine remaining in the bladder. The proximal urethra and bladder are both within the pelvis. Intra abdominal pressure increases (from coughing and sneezing) are transmitted to both urethra and bladder equally, leaving the pressure differential unchanged, resulting in continence. Normal voiding is the result of changes in both of these pressure factors: urethral pressure falls and bladder pressure rises.

Causes

- Polyuria: diabetes mellitus, primary polydipsia, central diabetes insipidus and nephrogenic diabetes insipidus, urinary urgency and frequency.
- Caffeine or cola
- Enlarged prostate
- Disorders like multiple sclerosis, spina bifida, Parkinson's disease, stroke and spinal cord injury

Types

- **Stress incontinence**: also known as effort incontinence, is due essentially to insufficient strength of the pelvic floor muscles.
- **Urge incontinence** is involuntary loss of urine occurring for no apparent reason while suddenly feeling the need or urge to urinate.

Cont...

- **Overflow incontinence**: Sometimes people find that they cannot stop their bladders from constantly dribbling or continuing to dribble for some time after they have passed urine. It is as if their bladders were constantly overflowing, hence the general name overflow incontinence.
- **Mixed incontinence** is not uncommon in the elderly female population and can sometimes be complicated by urinary retention, which makes it a treatment challenge requiring staged multimodal treatment.

Cont...

- **Structural incontinence**: Rarely, structural problems can cause incontinence, usually diagnosed in childhood (for example, an ectopic ureter). Fistulas caused by obstetric and gynecologic trauma or injury can lead to incontinence.
- **Functional incontinence** occurs when a person recognizes the need to urinate but cannot make it to the bathroom. The urine loss may be large. Causes of functional incontinence include confusion, dementia, poor eyesight, poor mobility

Cont...

- **Bedwetting** is episodic UI while asleep. It is normal in young children.
- **Transient incontinence** is a temporary version of incontinence. It can be triggered by medications, adrenal insufficiency, mental impairment, restricted mobility, and stool impaction (severe constipation), which can push against the urinary tract and obstruct outflow.
- **Giggle incontinence** is an involuntary response to laughter. It usually affects children.

Diagnosis

- A careful history taking
- The physical examination
- Stress test– the patient relaxes, then coughs vigorously as the doctor watches for loss of urine.
- Urinalysis – urine is tested for evidence of infection, urinary stones, or other contributing causes.

Cont...

- Blood tests – blood is taken, sent to a laboratory, and examined for substances related to causes of incontinence.
- Ultrasound – sound waves are used to visualize the kidneys, ureters, bladder, and urethra.
- Cystoscopy – a thin tube with a tiny camera is inserted in the urethra and used to see the inside of the urethra and bladder.
- Urodynamics – various techniques measure pressure in the bladder and the flow of urine

Treatment

Absorbent pads and various types of urinary catheters may help those individuals who continue to experience incontinence.

Absorbent products include shields, undergarments, protective underwear, briefs, diapers, adult diapers and underpads.

Treatment

Growth and development

- Most urinary incontinence fades away naturally. Here are examples of what can happen over time:
- Bladder capacity increases.
- Natural body alarms become activated.
- An overactive bladder settles down.
- Production of ADH becomes normal.
- The child learns to respond to the body's signal that it is time to void.

Cont...

- **Medications**
- Desmopressin or DDAVP
- Another medication, called imipramine, is also used to treat sleepwetting.
- muscle spasms and belongs to a class of medications called anticholinergics.

Cont...

Bladder training and related strategies

- Bladder training consists of exercises for strengthening and coordinating muscles of the bladder and urethra, and may help the control of urination.
- Determining bladder capacity
- Stretching the bladder (delaying urinating)
- Drinking less fluid before sleeping
- Developing routines for waking up

Cont...

Moisture alarms

- At night, moisture alarms can awaken a person when he or she begins to urinate. These devices include a water-sensitive pad worn in pajamas, a wire connecting to a battery-driven control, and an alarm that sounds when moisture is first detected.