

URINARY INCONTINENCE IN GERIATRIC PATIENT

LEARNING OBJECTIVES

- Understanding the scope of the problem and its implication
- The importance of the diagnostic evaluation of the incontinent patient
- Management of the incontinent patient
- Understanding the criteria for referral or further evaluation

TEACHING STRATEGIES

- Interactive
- Lecture discussion
- Hand out

EQUIPMENT AND MATERIALS NEEDED

- Overhead projector
- White board , flip chart

LEARNING POINTS

Significance of urinary incontinence.

- Social implications – loss of self-esteem, dependence, isolation, sexual inhibition, depression, family tensions
- Medical implications – urinary tract infections, skin breakdown with decubiti, sepsis, nursing home placement
- Risk Factors for incontinence
 - Childhood nocturnal enuresis
 - Morbid obesity
 - Lack of physical exercise
 - Medical disease (congestive heart failure, chronic obstructive pulmonary disease)
 - Elderly
 - Bed patients versus ambulatory
 - Dementia

Age related changes in urinary activity

- Bladder detrusor muscle overactivity
- Decrease ability to postpone voiding
- Decrease in urinary flow rate

- Decreased ability to totally empty bladder (Increase in the post voiding residual volume)
- Decrease estrogen level in women – decreased sphincter muscle activity
- Effect of benign hypertrophy of prostate in men – increased obstruction and post-void residual

Diagnostic evaluation of urinary incontinence

History is the key component

- Onset of incontinence
- Precipitating factors (cough or laugh, position such as standing or reclining)
- Frequency of incontinence (constant or occasional)
- Bowel and sexual function
- Other medical condition (heart failure, UTI, COPD, diabetes, diuretic medication, etc.)

Comprehensive physical examinations

- Alertness
- Cognitive function
- Vital signs
- Examination of back
- Cardiovascular examination
- Abdominal examination
- Extremities examination
- Genital examination
- Neurological examination

Lab test

- Urinary analysis
- Measurement of urinary volume and post-void residual
- Renal function test, glucose, calcium, B12.
- Cystoscopy, Cytology if needed
- Voiding record.

Common Types of Incontinence

- Urge Incontinence
 - Strong, irresistible contractions of the bladder detrusor muscles
 - Presents as frequent urination, and incontinence if voiding not immediately possible
 - Most common cause is spasm of bladder detrusor
 - Can be caused by inflammatory process such as UTI, estrogen deficiency, malignancy of the bladder, ureteral calculi, bladder parasites
 - Can also be caused by medications that increase urine flow, such as diuretics, theophylline, caffeine, alcohol
 - Usually voiding volume is small, but there is small post-void residual
- Stress Incontinence
 - Loss of urine with increased intra-abdominal pressure, such as when coughing, laughing, lifting, etc.

- May be related to anatomic changes in urethra, especially in women
 - Also related to estrogen deficiency or neurologic abnormalities
 - Voiding volume and post-void residual is often normal
 - Often associated with pelvic relaxation in women
- Overflow Incontinence
 - Leakage of urine because of overdistention of bladder
 - Often associated with bladder outlet obstruction (prostatic hypertrophy in men) or neurologic dysfunction with loss of bladder detrusor muscle tone
 - Can occur with stress such as laugh or cough, so may mimic stress incontinence
 - Can be caused by sedatives, narcotics, alcohol, antidepressants, antispasmodics
 - Voiding volume is small, and post-void residual is large, often >500 ml.

Management of Incontinence

- Urge Incontinence
 - Identify and eliminate unnecessary medication
 - Evaluate for inflammatory problem (UTI, malignancy, calculus, etc.)
 - Bladder training exercises – hold urine as long as possible, try for increased volumes
 - Medication – oxybutyrin (Ditropan), or imipramine (anti-cholinergic medication)
- Stress Incontinence
 - Sphincter training exercises – hold urine during mid void (Kaegle exercises)
 - Identify and treat estrogen deficiency (oral or vaginal estrogen in women)
 - Consider α -adrenergic medication (pseudoephedrine)
 - Surgery may be needed to correct bladder outlet abnormalities in women with pelvic relaxation
- Overflow Incontinence
 - Identify and eliminate unnecessary medications
 - Evaluate possibility of bladder obstruction (prostate, urethral stenosis)
 - In elderly or bed-ridden, be sure there is no fecal impaction
 - In diabetic, improve control of glucose
 - Consider cholinergic medication to strengthen bladder detrusor muscle
 - May need intermittent catheterization or long term catheter

HEALTH EDUCATION MESSAGES

- Fluid intake (amount)
- Numbers of voiding during day and night
- Bowel movements

CRITICAL ELEMENTS FOR REFERRAL

- Unresolved incontinence in spite of initial trial of management
- Suspicion of bladder obstruction
- Evidence of neurologic disease
- Need for surgery

CRITICAL ELEMENTS FOR EVALUATION OF COMPETENCE

- Understanding the social and medical significance of incontinence
- Describe the three most common forms of incontinence and their causes
- Describe the management of the three most common forms of incontinence