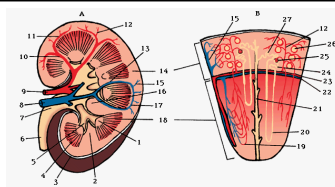


Incontinence of Urine and Faeces

Incontinence of Urine

Definition: A condition in which involuntary loss of urine occurs, which is a social and hygienic problem, and which is objectively demonstrable.
(International Continence Society)

Anatomy and Physiology



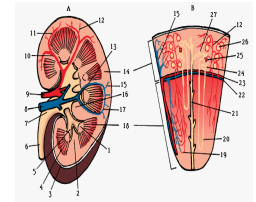
– (A) Kidney: Longitudinal Section

– (B) Nephron and Adjacent Blood Vessels

1 renal papilla, 2 renal column, 3 capsule, 4 renal pyramid, 5 calyx, 6 ureter, 7 renal pelvis, 8 renal vein, 9 renal artery, 10 interlobar artery, 11 arcuate artery, 12 interlobular artery, 13 interlobar vein, 14 cortex, 15 interlobular vein, 16 renal sinus, 17 arcuate vein, 18 medulla, 19 vasa recta, 20 loop of Henle, 21 collecting duct, 22 arcuate vein, 23 arcuate artery, 24 proximal convoluted tubule, 25 glomerulus, 26 Bowman's capsule, 27 distal convoluted tubule

• Glomerulus and Bowman's Capsule (ref. no.25, 26)

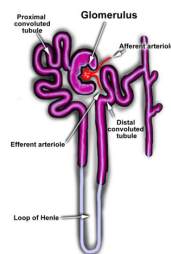
- Thickened filtration membrane
- Reduced glomerular blood flow
- Reduced filtration
- Glomerular degeneration



▪ Proximal tubule

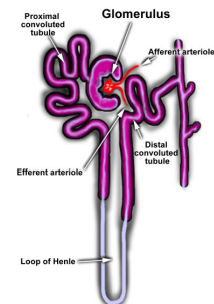
Reduced re - absorption of amino acids, glucose and hormones

Reduced and fine control over salt re - absorption potentially contributing to electrolyte imbalances



• Distal tubule

- Reduced size and development of distal diverticulae may lead to cyst formation
- Reduced sensitivity to antidiuretic hormone
- Reduced clearance of drugs and toxic metabolites



Little can be done to slow the age-related changes to the renal system. Fortunately the kidneys have a built-in redundancy (the renal reserve) and, in the absence of disease, they usually function adequately throughout life.

Incontinence is:

- Increased association with age
- Increased association with physical activity
- Increased association with faecal incontinence especially in nursing homes and long-stay wards.

How Common

Data varies (developed countries), in elderly age, from 65 years onwards

Community Dwellers	10% -- 20% Females 7% -- 10% Males
Residential Homes	25%
Long Term Wards	50%
Long Term Psycho-Geriatric Wards	80%
Hospital Wards	50% -- 70%

Potential Effect

Wet: cellulitis and pressure sores

Retention and Catheter: urinary tract infection

Wet floor: falls and fractures

Wet sheets: sleep interruptions

Odor: embarrassment, depression, social withdrawal

Carer breakdown: chronic institution

Causes

Usually multifunctional such as

- ❖ **Specific genitourinary pathology**
+/-
- ❖ **Age associated changes**
+/-
- ❖ **Co-morbid conditions**

Types of Incontinence

- **Transient**
- **Established**

Causes of Transient Incontinence

- 1) Delirium (Acute Brain Failure)
- 2) Infection
- 3) Atrophic vaginitis and Urethritis
- 4) Pharmaceuticals
- 5) Psychological
- 6) Excessive urine output
- 7) Restricted mobility
- 8) Stool impaction

Established Incontinence

1. **Urge (most common)**
2. **Stress**
3. **Overflow**

Urge Incontinence

- i. Symptoms of urgency, frequency, leakage
- ii. Problems is of detrusor over activity (uninhibited bladder contraction)
- iii. Can be due to a neurological condition. Such as: Strokes, Alzheimer's and spinal cord injuries.
- iv. Can occur without a neurological problem (detrusor instability, unstable bladder)
- v. It is usually idiopathic (without specific cause)
- vi. It is usually age related
- vii. Can be caused by local bladder pathology and irritation e.g. cancer, stones, obstruction.

Stress

Symptoms or leakage with increased abdominal pressure
Caused by impaired urethral closure due to insufficient support from the pelvic muscles
A. Second most common cause in females
B. Can also occur in males as a result of post prostatectomy

Overflow Incontinence

Symptoms of dribbling, small volume, leakage, hesitancy and weak stream

Caused by outlet obstruction or detrusor under activity or both

It is the second most common in men:

- Obstruction:- prostatic hypertrophy, cancer, urethral stricture, large cystocoele
- Neurological causes

Assessment

History

- Ask specifically whether the problem exist
- Whether recent or longstanding
- Whether both day and night or during the night only
- The frequency, timing and volume of urine (voiding record-time, volume)
- Any other urinary symptoms
- Medical conditions
- Mental state
- Bowel habits

Clinical Aspects

- Alertness, cognitive function
- Functional status
- Neurological examination
- Abdominal Examination such as palpable bladder
- Gynaecological examination to exclude vaginitis or cystocele
- Rectal examination (faecal impaction, prostate hypertrophy, palpable masses)

Investigations

Urine analyses and microscopy
Urine culture and sensitivity
Blood tests:- glucose, renal function and electrolytes
Abdominal X-Rays to detect impaction or bladder stone
Ultra sound
Urodynamic tests to measure flow, pressure and residual urine.

Management

Treat Transient cause

- ❖ Infection, constipation, diabetes control
- ❖ Use of commodes
- ❖ Environment

In Established

- Continenence Chart
- Bladder re-training
- Regular toileting
- Pelvic floor exercises
- Operation (prostate, cystocele)
- Pads, pants nappies
- Catheterization always as a last remedy

Never as a first option unless retention

Potential Catheterization Problems

- Can cause trauma or urethral stricture
- Can cause infection
- Can leak, get blocked (encrustations), cause bladder contractions
- Can get stuck either on insertion or when removing
- Can fall out
- Need regular changing

Faecal Incontinence

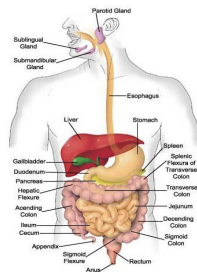
Definition: Involuntary leakage of rectal content through the anal canal (Royal College of Physicians 1995)

Prevalence:

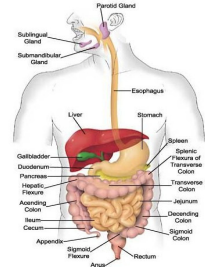
- Community 1% - 4%
- Residential homes 10%
- Long stay wards 25% - 35%

Anatomy and Physiology

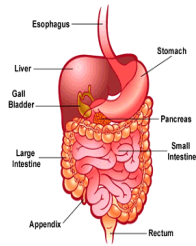
- Nose and Mouth
Reduction in sense of smell and taste. Difficulty in swallowing food
- Oesophagus
Oesophageal sphincters lose tension



- **Stomach**
Reduced elasticity in stomach wall
Decreased gastro – mucosal protection
- **Liver**
Shrinkage of liver occurs with loss of hepatocytes
Reduced ability to detoxify
Substances including drugs
- **Gall Bladder**
Production and flow of bile decreases bile becomes thicker



- **Pancreas**
Decreased secretion of pancreatic protease and lipase
- **Small Intestine**
Shrinkage of villi and reduction in absorption
- **Large Intestine**
Peristalsis slow down
Decline in rate of cell division and lining repair



Causes

- Immobility
- Constipation and impaction
- Neurological (dementia, stroke, parkinson's)
- Diarrhoea
- Pathology
- Weakness of anal sphincter or pelvic floor muscles
- May be multi functional

Causes of Constipation

- Diet (Lack of roughage)
- Dehydration
- Immobility
- Carcinomas
- Medicines such as anti-depressants
- Neurological problems

Diarrhoea

Any condition that induces diarrhoea can lead to faecal incontinence such as:

- Infective enteritis
- Diverticulitis
- Colitis
- Carcinoma
- Medication (antibiotics)
- Malabsorption Syndrome
- Frequent Watery Stools (Irritable Bowel syndrome)

Neurological

Causes include: Dementia
Stroke

Frequency once or twice daily

Can occur half an hour after meals
(gastro-colic reflux)

Assessment

- Onset
- Stool frequency
- Stool consistency (solid, semi liquid)
- Straining hard motions (constipated)
- Rectal sensation intact? (neurological)
- Delayed defecation (neurological)
- Other symptoms (blood, mucus, pain)
- Diet (roughage)
- Fluid intake
- Medication
- Mental state

Clinical Examination

- Abdominal masses (faecal, carcinoma)
- Rectal examination masses(blood, stool consistence, faecal loading)
- Mobility
- Hydration
- Mental state
- Neurological examination

Investigations

- Plain abdominal X-Ray
- Ba enema
- Sigmoidoscopy or colonoscopy
- Blood tests: Anaemia
- Renal function
- Electrolytes
- Thyroid function

Management

- a. Continence Chart: stool frequency, consistency, treatment effect
- b. Diarrhoea: treat cause
- c. Constipation / Impaction: Empty rectum (suppositories, enemas, manual evacuation)
- d. Prevent recurrence (diet, fibre, hydration, mobility, laxatives)

THE END