Conservative Management of incontinence

W8, 15 October 2012 09:00 - 16:45

Start	End	Topic	Speakers
09:00	09:30	Welcome	• Katherine Moore • Yuli Zang
09:30	10:30	Assesment of a person with LUT symptoms: bladder diary, physical examination, urinalysis, post void residual, medication and medical history.	• Sharon Eustice
10:30	11:00	Break	None
11:00	12:30	Stress urinary incontinence	• Margaret Sherburn
12:30	13:30	Break	None
13:30	14:30	Urgency and urgency incontinence	• Kathleen Hunter
14:30	15:30	Overflow incontinence and incomplete emptying	• Leigh Pretty
15:30	16:00	Break	None
16:00	17:00	Products for managing incontinence	• Lesley-Ann Hanson
17:00	17:15	Chair closing remarks	• Yuli Zang

Aims of course/workshop

At the end of this session, the attendees will have been exposed to the current evidence on aetiology, assessment and treatment of stress, urge and overflow urinary incontinence in the adult. Each session will address practice differences in the speaker's country, provide some examples of multidisciplinary care (PT, OT, Physician), and will include case studies illustrating the application of evidence to improve continence.

Educational Objectives

Exposure to the evidence based aetiology and management of urinary incontinence as well as a review of the pervasiveness of the problem should provide healthcare professionals with a renewed interest in asking the question "do you have any problems with bladder control?" This confidence will help identify those individuals who are embarrassed, suffering in silence, or unaware that management options are varied and available.

The workshop will begin with the basics of assessment of an individual with stress, urgency or overflow urinary incontinence. It will then cover physiology and anatomical changes, contributing factors (including medications), and treatment/management. Each presentation will be supported by case studies; audience participation will be encouraged.

Assessment of a person with lower urinary tract symptoms: bladder diary, physical examination, urinalysis, post void residual, medication and medical history.

Assessment is a fundamental aspect of working towards a clinical diagnosis so that treatment is appropriate, safe and underpinned by best available evidence. Furthermore we can determine the level of bother and impact on quality of life. To assess our patients well, we need to understand the features of storage, voiding and post-micturition disorders. Critical to this, is an educated workforce that is sensitive and compassionate towards the distressing range of lower urinary tract symptoms a person can present with. This presentation will focus on the simple, yet vital investigations that offer intelligence about the presenting complaint.

- **Bladder diary**

Completion of the bladder diary enables the documentation of a variety of measurements such as daytime frequency, nocturia, urgency etc. It is recommended that that a minimum of 3 days is collected. However, compliance can be a concern and so a pragmatic approach may be required.

- **Physical examination**

The clinician should be offering a physical examination (abdominal, neurological, vaginal etc.) to yield further information as an adjunct to taking a good history.

- **Urinalysis**

Simple urine dipstick is an important screening test, although not diagnostic. Detection of haematuria, polyuria, glycosuria and bacteriuria is possible with simple dipsticking of urine. Clinicians should be using a dipstick with multiple parameters and is considered an essential test in all lower urinary tract symptoms assessment. Complete urinalysis refers to microbiological investigation within the laboratory setting.

- **Post-void residual (PVR) urine**

Although there is lack of consensus on what constitutes a significant, abnormal PVR measurement, it has become an increasingly useful tool, especially in a sub-set of patients with, for example, neurological disease or bladder outlet obstruction. However, where there is suspicion that there is decreased bladder emptying, then PVR measurement should be considered. The use of portable equipment is seen to be less invasive and cost-effective compared to in and out catheterisation.

- **Medication**

There are medications that will exacerbate lower urinary tract symptoms and therefore clinicians should seek to find out what the patient is taking.

- **Medical history**

Listening carefully to the patient's history will reveal useful information and can help to focus direct and open questioning, such as precipitating and aggravating factors, as well as duration, onset and degree of bother.

It has been well documented that lower urinary tract symptoms are highly prevalent and can impact on every aspect of a patient's life. We need to understand what comprises LUTS and their definitions; be familiar with the epidemiology and pathophysiology of LUTS; understand the impact; take a thorough history and perform a physical examination; know the investigations available, how to interpret them and when to refer.

Abrams P, Cardozo L, Khoury S & Wein A (2009) Incontinence: 4th International Consultation on Incontinence Health Publication Ltd

Sharon Eustice RN, BPhil, MSc, Cornwall ENGLAND

Workshop 8: Conservative management of Incontinence

Topic: Stress urinary incontinence. 11.00am – 12.30pm

What is stress incontinence? Definition: 'The complaint of involuntary los of urine on effort or physical exertion, or on sneezing or coughing' (Haylen et al 2010)

Stress incontinence is the most prevalent form of incontinence, accounting for around 50% of all incontinence. For stress incontinence to occur, abdominal pressure on the bladder must be greater than the closure pressure of the urethra. This can occur due to anatomical defects in structures that support the bladder and urethra (eg. urethral hyper-mobility, intrinsic sphincter deficiency) and/or neural and muscular control defects (pelvic floor muscle weakness or timing) (Dumoulin and Hay-Smith 2010).

Stress incontinence in women can be caused by the hormonal changes and weight gain during pregnancy, stretch and compression of ligaments and muscle during vaginal childbirth, loss of hormones at menopause, and degeneration of pelvic ligaments, nerve supply and pelvic floor muscles in older adults. Pregnancy and childbirth can stretch and weaken the pelvic floor muscles that support the urethra. Other factors contributing to stress incontinence include diabetes, chronic cough (asthma, smoking or bronchitis), constipation and obesity.

Assessment is by clinical examination, and can be confirmed by urodynamic testing. Clinical history questions are used to assess the frequency, severity, causes, and bother of the leakage. A vaginal examination then assesses for urethral hypermobility, and pelvic floor muscle integrity, strength and coordination.

The mainstay of conservative treatment is pelvic floor muscle training, for which there is level 1A evidence (Abrams et al 2009). Strong pelvic floor muscles compress the urethra against the pubic bone to create a functional sphincter, form a stiff hammock to support the bladder and urethra, and work with the urethral sphincteric muscles to compress the lumen of the urethra (Bo et al 2009). Functional training, such as using a pre-contraction of the muscles before a stressful activity such as coughing, has also been shown to be effective in reducing leakage with a deep cough (Miller et al 1998). Pelvic floor muscle training has been shown to be effective in healthy older women and for the effect to last after the treatment ceases (Sherburn et al 2011).

Pelvic floor muscle training is most effective when it is maintained for 15-20 weeks and there is frequent contact with the clinician to enhance motivation. There are adjunctive therapies which complement muscle training, such as electrical stimulation, EMG or ultrasound biofeedback and vaginal weights, but these have not shown to add a large benefit to muscle training (Dumoulin and Hay-Smith 2010). Change after treatment is measured by a decrease in urine loss in a pad weigh test, or by a self report questionnaire.

Stress incontinence can be successfully treated with conservative methods when the patient and clinician work together to maintain motivation during the treatment period.

Urgency and Urgency Incontinence

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Assistant Professor, Faculty of Nursing, U of A
Nurse Practitioner, Glenrose Specialized Geriatrics

ICS Workshop Conservative Management Beijing 2012

Objectives

- Define urgency and urgency incontinence
- Review epidemiology and pathophysiology
- Discuss conservative management interventions

Bladder Brain Connection

Diagram to be inserted

Control of Voiding

- There are connections between the forebrain and the pons (brainstem) that regulate voiding
- The spinal cord provides communication between the brain and lower urinary tract and some reflex control
- The lower urinary tract has autonomic (involuntary sympathetic and parasympathetic nerves) and somatic (voluntary) nerves that help regulate storage and emptying

Control of Voiding

- Storage and emptying can occur both voluntarily and involuntarily (reflex voiding)
- The central (brain) control is like an on-off switch

Disease affects voiding through:

- Central control (e.g. stroke, dementia)
- Local neurological control (e.g. diabetic cystopathy)
- Anatomical structure/integrity of the lower urinary tract (e.g. uterine prolapse, or BPH)

Urgency and Urge Incontinence

- Urgency and urge incontinence are storage symptoms
- Other storage symptoms are frequency and nocturia

Definition: Urgency

- The complaint of a sudden compelling desire to pass urine, which is difficult to defer

Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21,* 167-178.

Definition: Urgency Incontinence

- The complaint of involuntary leakage accompanied by or immediately preceded by urgency

Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21,* 167-178.

Other symptoms

- Sometime we see urgency and urgency incontinence with stress incontinence
  - This is called mixed incontinence

Other symptoms

- Sometimes we see urgency and urgency incontinence with daytime frequency and nocturia
  - This is called overactive bladder syndrome

Other symptoms

- Some people can have a urgency and urgency incontinence, but also have a bladder that does not contract well
  - The person may have the urge to void frequently, but have poor bladder emptying
  - On urodynamic testing, uncontrolled detrusor (bladder contractions) can be seen with a high post void residual urine

Who gets urgency and urgency incontinence?

- Increases in incidence and prevalence with aging
- In two large population studies, the prevalence of overactive bladder was 16% of adults
  - 6% in 40-44 years, 35% in people over 75 years
  - Tends to occur earlier in women than men

Aging, Urgency and Urgency Incontinence

- Incontinence is NOT a normal consequence of the aging process
- But…. we are more at risk of incontinence as we age it is more likely we will have one or more chronic conditions that affect lower urinary tract function

What causes urgency and urgency incontinence?

- Can be transient or persistant
- Transient- Incontinence associated with an acute condition that resolves when the acute situation resolves
- Persistant - Incontinence that remains after an acute illness OR after all the factors associated with transient incontinence have been assessed and managed

Transient Causes:

- fluid intake (amount, type, timing)
  - Some people find caffeine and alcohol irritate the bladder
- stool impaction leading to bladder outlet obstruction
- atrophic vaginitis in older women (estrogen depletion)
- medications (e.g. diuretics)
- excess urine output from conditions such as diabetes, increased calcium, hypothyroidism
- urinary tract infection

Persistant Causes

- Central control (e.g. stroke, dementia)
  - Disrupts the communication between the forebrain and the pons in the brain stem
- Local neurological control (e.g. diabetic cystopathy, Parkinsons)
  - Damage to autonomic control
- Obstruction (e.g. BPH in men)

Stroke

- Initially the bladder after a stroke may be flaccid for a few days
- Long term, stroke can lead to urgency and urgency incontinence
- Impaired mobility and cognition after a stroke complicate continence

Dementia

- Alzheimers, vascular or other dementia
- Associated with urgency and urgency incontinence
- Impaired cognition and apraxia (difficulty carrying out tasks) may complicated toileting

Diabetes

- Due to sensory and motor neuropathy
- Classic definition: decreased bladder sensation, poor contractility of the bladder and increased post void residual urine
- More commonly a broad range of symptoms occur including urinary urgency, frequency, nocturia and incontinence
- Poor control of diabetes may exacerbate incontinence due to polyuria

Parkinson's Disease

- Part of the non-motor symptoms of Parkinson's disease
- Due to dysautonomia – disruption of the autonomic nervous system
- Symptoms include urgency, urge incontinence, poor contractility, increased post void residual
- Impaired mobility and cognition in late stages may make staying continent difficult

Multiple Sclerosis

- May lead to neurogenic detrusor over activity
- Can also get a poorly contracting bladder

Obstruction

- In men, obstruction from benign prostatic hyperplasia may contribute to urgency and urge incontinence.
- This may persist even after prostate surgery

Lifestyle contributors to overactive bladder

- Obesity
- Smoking
- Alcohol
- Caffeine
- Artificial sweetners

Consequences of Urgency and Urgency Incontinence

- Negatively affects quality of life
  - Sleep may be disrupted
  - Key in the lock syndrome

Consequences of Urgency and Urgency Incontinence

- Increase risk for falls
  - Urinary urgency and urgency incontinence increase risk of falls in older adults
  - Other symptoms of over active bladder (nocturia, frequency) also increase risk of falls

What do people need to maintain urinary continence?

- Functioning lower urinary tract
- Adequate cognitive ability
- Motivation
- Physical function (e.g. manual dexterity, mobility/transfer ability)

Management of Transient Urgency and Urge Incontinence

- Treat the underlying illness or problem
- Scheduled toileting
- Remove barriers to reaching toilet, support mobility
- Bowel management
- Adequate hydration
- Protect the skin
- Medications may need to be reviewed and changed

Management of Persistent Urgency and Urgency Incontinence

Lifestyle – Good bladder habits

- Decrease caffeine, artificial sweetners
- Limit alcohol (acts as a diuretic)
- Maintain hydration
  - 1.5-2 liters per day
  - Take most fluids during the day
- Empty the bladder regularly (q2-4 hours during the day, but don't over do it!)
- Stop smoking
- Weight loss if overweight

Scheduled Toileting

- Fixed toileting schedule every 2-3 hrs (waking hours)
- Aimed at assisting the incontinent person to stay drier
- Especially helpful for those with cognitive or physical functional loss.

Prompted Voiding

- Person is asked if he/she needs to void on a schedule and assisted to toilet only if it is requested.
- Aim: to reduce incontinent episodes.
- Cognitively intact or mild impairment
- Not for those with severe cognitive impairment (may not recognize the need to void).

Pelvic Floor Muscle Exercises

- Contraction of the pelvic floor muscles can inhibit urgency associated with detrusor (bladder) muscle contraction
- Strengthening the pelvic floor through regular pelvic floor muscle exercises can help urgency and urge incontinence

Urge suppression

- Instruct patient not to rush to the toilet in response to urgency as this may trigger detrusor contraction and increase intra-abdominal pressure
- Remain still, slowly contracting the pelvic floor muscles repeatedly until the feeling of urgency passes
- After stopping the urgency walk slowly to the toilet

Bladder Retraining

- Patient taught to respond to the clock not the urge to void
  - Pelvic floor muscle contraction to decrease the urgency (urge suppression)
  - time between voids gradually increased
- Aimed at restoring a normal pattern of voiding by decreasing the frequency of voiding in those with urgency
- Need to be cognitively intact and motivated

Nursing Alert: Anticholinergic side effects

- Anticholinergic agents are used to treat urgency and urgency incontinence
- Side effects: dry mouth, urinary retention, flushing, confusion
- Older people, especially those with dementia, are more susceptible to these side effects
- Monitor for retention of urine, confusion

Other Interventions

- Provide mobility aids (canes, walkers) for those with impaired mobility
- Incontinence pads and products
- Skin protection (hygiene and barrier creams)

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Overflow Incontinence & Incomplete Emptying

ICS Workshop: Conservative Management
Beijing 2012

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Topic Co-ordinator / Lecturer, Flinders University, Adelaide, Australia

Objectives

- Define conditions
- Review Lower Urinary Tract Symptoms
- Identify causes
- Discuss management options

Definitions

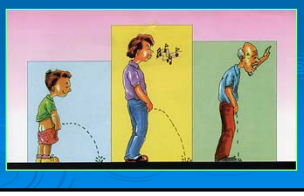
- 'Urinary incontinence is the complaint of any involuntary leakage of urine'
- ICS no longer recommends the term 'overflow incontinence' but refers to

'…retention of urine'

Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21,* 167-178

Definitions

'Feeling of incomplete emptying … a feeling experienced by the individual after passing urine'.



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Requirements for Voiding

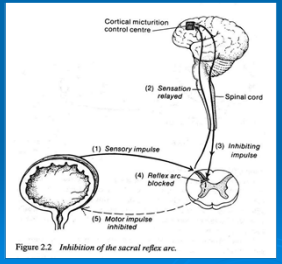


Figure 2.2 *Inhibition of the sacral reflex arc.*

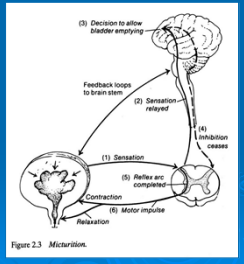


Figure 2.3 *Micturition.*

Norton, C 1996 Nursing for Continence p. 14

Storage symptoms

- Bladder sensation may be:
  - increased / reduced / absent / non-specific
- If sensation is present may include:
  - Nocturia
  - Urgency
- Incontinence - may be continuous
  - Nocturnal +/- daytime

Voiding Symptoms

May include:

- Hesitancy
- Straining
- Stream:
  - Slow
  - Splitting or spraying
  - Intermittent
- Terminal dribble

Post Micturition

Symptoms

- Feelings of incomplete emptying
- Post micturition dribble

Causes

Bladder Outlet Obstruction

- Enlarged prostate
- Large prolapse
- Tumour
- Stricture
- Faecal impaction

Causes

- Bladder failure
  - neurological
    e.g. spinal injury,
    diabetes, MS
  - medication

Management Goals

- Prevent urinary retention where possible
- Treat underlying conditions
- Empty bladder regularly
- Reduce
  - Risk of infections
  - Incontinence
  - Frequency
  - Urgency
  - Skin damage
- Improve QOL

Management options

- Comprehensive assessment
- Surgery?
- Medication?
- Conservative management

Conservative management

Consider:

- Double voiding
- Reflex voiding
- Bladder expression (Crede)

When is a catheter necessary ?

- Acute and Chronic urinary retention
- Severe skin excoriation 2^0 to urine contact
- Palliative care
- Severe UI when other forms of management have failed
- Investigations / treatments

Catheterisation

Bladder emptying with use of a urinary catheter

- Intermittent (in / out)
  - ISC intermittent self-catheterisation (by patient)
  - IC intermittent catheterisation (by other person eg doctor, nurse, relative)
  - CIC clean intermittent catheterisation
  - AIC sterile technique

Intermittent Self Catheterization (ISC) / Urethral Dilatation: Pt factors to consider:

- Bladder function - need for catheter/dilatation
- Personal preference / consent
- Mobility / dexterity / strength
- Sexuality / lifestyle
- Physical / psychological status
- Support

Indwelling Catheter (IDC) Urethral vs Supra Pubic (SP)

Consider SP:
- for long term use
- comfort
- ↓bladder neck erosion
- dementia
- sexually active
- pt preference
- Trial of voiding
- urethral obstruction

Indwelling Foley* Catheter

- Tip
- Eyes
- Balloon
- Lumen
  - Latex
  - Silicone

*designed by Dr Foley in conjunction with Davol in 1930s

Catheter composition

- Intermittent
  - PVC
  - PVC with lubricating coating
- Short term
  - Silicone elastomer coated latex
- Long term
  - Hydrophilic/ Silver Coated latex
  - Silicone
  - Antimicrobial coated

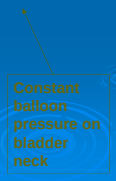
Latex vs Silicone

Coated Latex
- Relatively inert
- Highly Biocompatible
- Round drainage lumen
- Large drainage eyes
- Soft, pliable and smooth
- Has a Memory
- Clinical evidence shows No Bacterial Adherence compared to 100% silicone

Silicone
- Inert ,Biocompatable
- Crescent shaped lumen Thin walled
- Small Drainage eyes
- Abrasive because of manufacturing process
- No Memory
- Static
- Material is highly permeable

Catheter selection

- Purpose & duration
- Composition
- Gauge
- Length
- Balloon
  - Usually 5 - 10ml, Haematuria 30ml
  - inflate with ONLY WATER
- Tip: Short, straight, coudé



Document catheterisation

- reason for catheter
- Urethral/SP
- ease of insertion
- volume drained
- type and size of catheter, balloon size
- type of bags & straps
- Change date and arrangements (eg homecare)
- supply details

Drainage

- Leg
- Belly
- Overnight
- Tubing length
- Tubing bore
- Sterile
- Drainable
- Tap
- Capacity
- ?? Valve - consider

Drainage

- Secure catheter (can alternate sides each day)
- Don't obscure the flow
- Use knee joint as an anchor
- Check pt can open tap
- Insert overnight bag into outlet

Long-term Complication of Urethral IDC

- risk of urethral destruction / necrosis 2^0 to pressure & tension
- Often recognized too late

Erosion:
Full length of penile urethra 2^0 to catheterization

Problems

- Bypassing / leaking
- Pain / discomfort
- Urine - sediment, blood, clots, calculus
- UTI
- Constipation
- Catheter removal
- Inflammatory / neoplastic changes

Infections with ISC

- UTI common when starting technique
- Cleaning of equipment
- Adequate treatment of infections
- Check for causes eg stones
- If persistent, prophylaxis
- May need to ↑ frequency of ISC
- Avoid residuals >500ml

Catheter associated UTI

- Colony forming units (cfu) normal > 48 hrs
- Treat if symptomatic
- Single UTI
  - treat for 1 week then check

  Recurrent UTIs
  - Refer to urology
  - possible stone, diverticulum, foreign body
- Check hygiene
- Check fluid intake

Preventing problems

- Appropriate catheter selection
- Minimize trauma, haematuria, pain
- Adequate fluids
- Prevent constipation
- Routine hygiene care - soap and water

When to change

- Is the catheter needed?
- Assess individual
  - state of urine
  - tendency to problems
- Change (long term)
  - usually 6 - 8 weeks
  - if problems 4 weeks
  - if left for 10 -12 weeks, may lead to increased encrustation and infection

Urine composition

- Haematuria, clots
  - Is pt on anticoagulants?
  - Check for UTI
  - Check for trauma
- Sediment
  - Increase fluid intake
  - Increase lumen and drainage tube size
  - Can change pH

Pain & discomfort

- Bladder spasm / detrusor overactivity
  - Antimuscarinics

  Check balloon
  - size, inflation, position
- Review catheter
  - size, composition, position
- Atrophy / inflammation / infection
- Pressure area at meatus

Bowels

- Constipation or faecal impaction can lead to:
  - bladder spasm
  - overflow
  - obstruction
- Straining to defaecate may cause catheter dislodgement
- Contamination esp in females

Patient confusion

- Avoid catheter if tendency to pull catheter out
- Consider intermittent catheterization by carer
- Increasing size of catheter or balloon

  will not help
- Check securement of catheter / clothing
- If history of catheter pulling, check for stricture (post trauma)

Thank you!

- Questions?

Selected References

- Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21*, 167-178
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Capital Health
Edmonton and area

Incontinence Products; Containment Devices

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October, 2012
ICS, 2012
Bejing, China

Outline

- Factors to Consider when choosing products
  - Skin Care & odor control
  - Cleansing
  - Moisture & Barriers
- Products for Women
- Products for Men
- Products for Women & Men
- Mechanical Devices & other devices

Factors To Consider

- Type and severity of incontinence
- Person's functional status
- Care setting
- Simplicity of use
- Cost of the product and availability
- Durability

Factors To Consider

- Maintenance required?
- Absorbency / saturation capacity
- Person's preference and comfort
- Product profile beneath clothing
- Noise level
- Odor control properties

Skin care

- Good skin care prevents tissue breakdown
- Good skin care requires
  - **cleanser**
  - **moisturizer**
  - **barrier**
- All-in-one cleanser/moisturizer/ barrier products are available

Skin-care washcloths

- If the skin is healthy there are commercial skin-care washcloths
- Use soft cloths such as J-Cloths to avoid abrading skin or use commercial wipes
- Clean & protect in one step

Cleansing

- Remember pH of skin is 4.5 – 6
- Use a mild soap product close to that pH
- Avoid bar soaps, which are alkaline
- Avoid alcohol-based preparations

Cleansing

Avoid:

- Talcum powder & Vaseline (oil based)
  - powder forms lumps and both entrap moisture which collects in skin folds
- Products containing alcohol
  - dries the skin
- Products containing zinc
  - if allergic

Odor control

If urine odor is offensive:

- increase fluid intake
- ***check for infection***

For cleaning the environment:

- white vinegar & water is effective

Moisturizer

Use a water-based moisturizer such as

- Glycerin
- Mannitol
- Sodium lactate or lactose

Barrier preparations

- Increases or augments the normal barrier function of the skin
- Thin application works best with incontinence products
- Watch for zinc allergies

Products for Women

- 10-25% of ***sanitary napkins*** are purchased for incontinence
- ***Not*** designed for urine absorption
- ***Do not*** control odor
- Should not be used if a continence pad is available

For light incontinence

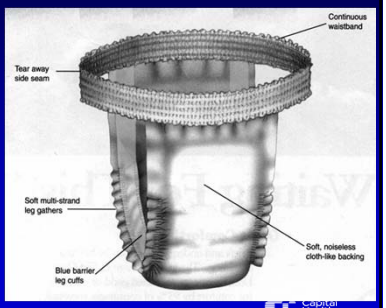
Continence Pads:

- Light (½ c)
- Regular (¾ c)
- Extra (1 c)
- Extra Plus (1¼ c)
- Ultra (1½ c)
- Ultra plus (1¾ c)

Moderate incontinence

- Slip-on product with elastic waist
- Very easy to take on and off
- Very comfortable
- Highly absorbent

- Can be good adjunct at night



Heavy incontinence

- Protective pull on underwear the newest product introduced by several companies

- Mimics regular underwear
- Can be useful at night

- Absorbs 750-1000 mls!

Heavy incontinence

Fitted brief:

- Elastic waist allows pulling up and down
- Can have 4 to 6 refastenable tapes
- Elasticized leg

- Absorbency can be enhanced with liner
- Can be useful at night

Reusable products

- Some people will prefer a reusable product in consideration of the environment

- Reusables are not as absorbent as disposables (especially after several washes)

- Liners can be used to enhance absorption, especially at night

Products for men

Light incontinence

- Male pouch

Moderate Incontinence

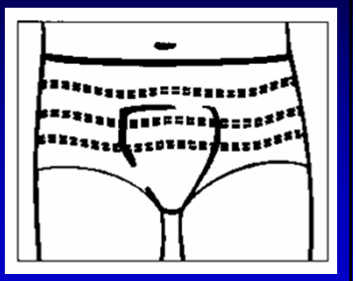
Guards for men

Moderate to heavy incontinence

- Pad and panty system
- Men's and women's underwear with moisture-proof pocket to hold super-absorbent liner
- Boxer short available for men

Mesh pants

- Many companies make mesh stretch pants
- They can be combined with several different liner type pad products



Product challenges

Night-time containment

- may require a combination of products

Product challenges

Larger person

- Bariatric products available
- Existing products can be modified
  - e.g. elastic extensions

Make their own

Underpads

Reusables
- Chair protectors

These pads, disposable or reusable allow the client to feel secure at night time and make life easier for the caregiver

A suitable product promotes independence and activity for enhanced quality of life

Pessaries for Incontinence

- Traditionally pessaries were used for prolapse
- Pessaries used in urinary incontinence with success (>70%)
- Limited trials on pessaries in general and especially incontinence pessaries

Pessaries

- Placed in the vagina to help support the pelvic muscles, the pelvic organs
- For stress, urge & mixed incontinence in women
- If surgery is not
  - suitable
  - wanted
  - possible

Incontinence pessaries

Incontinence ring

Incontinence Dish

Incontinence dish with support

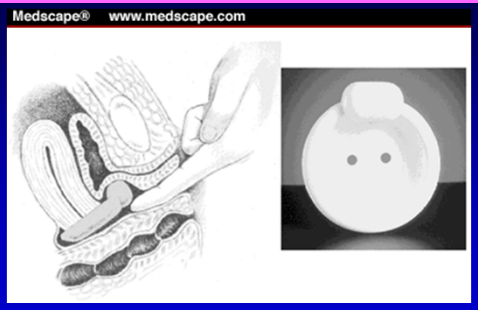
Support & knob pessary

Mode of action

Increases urethral closure pressure; supports the bladder neck

- Useful for women with stress urinary incontinence
- Useful for women with urge urinary incontinence
- Useful for women with mixed urinary incontinence

Mode of action



Indications for pessaries

Stress, Urge & Mixed Incontinence

- In addition to other conservative treatment
  - PFMT, lifestyle changes
- Temporary measure pre-op
- Incontinence after failure of surgery
- Diagnosing latent incontinence pre-op
- Patient preference

Contraindications for pessaries

- Active vaginal infections
  - Treat and eradicate before use
- Undiagnosed vaginal bleeding

Pessary fitting

- Trial and error
  - many styles and sizes
- Should be comfortable… “I can’t feel it”
- Should be able to empty bladder

Checking fit

- Must be able to place the width of a finger between the pessary and the side wall of the vaginal
- Must be able to empty the bladder
- Must not come down or out with coughing or bearing down

Follow up care

- Patients should be taught when possible to remove and insert their own pessary
- Initial follow-up within 2-4 weeks
- Follow-up interval
  - Self care every 6-12 months
  - Healthcare provider care every 3-6 months

Healthcare follow-up

- Speculum exam to rule out abrasions, ulcerations and infections
- Clean pessary with dish soap and water and reinsert
- Treat any infection or erosions
  - Leave device out for two to three weeks and treat with antibiotic cream and/or vaginal estrogen cream

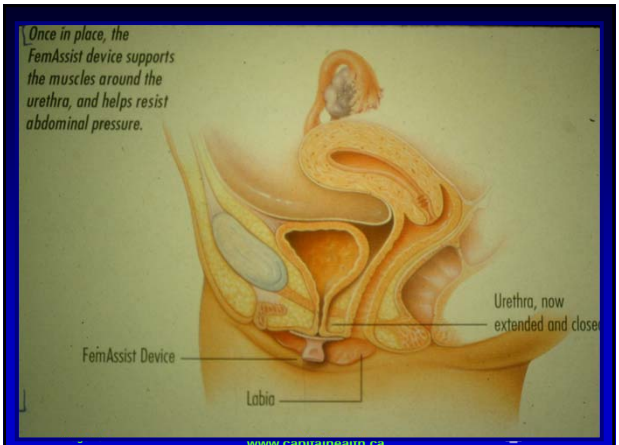
Complications

- Vaginal discharge and odor
  - May be due to an erosion
  - Can be treated with Trimo-San jelly
- Discomfort
  - Likely poor fit
- Vaginal abrasions or ulceration
  - May be too large or tissues lacking estrogen
- Rare
  - Obstruction voiding/defecation
  - Embedded (lost to follow-up)

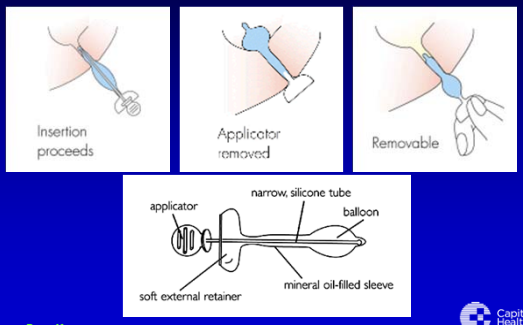
Urethral inserts/plugs

Several have been developed

- for women with stress incontinence



Urethral plugs



Problems with plugs

- Cumbersome to use
- High rate of side effects
- Cannot be used in person's
  - immune compromised
  - history recurrent/chronic bladder infections
  - urethral scarring/surgery
  - kidney disease
  - blood thinners
- Cannot be used for urge incontinence

Complications urethral plugs

• Bacteruria	35%
• infections	30%
• Irritative symptoms	23%
• Insertion trauma	7%
• Device failure	<5%
• Hematuria	<5%
• Migration into bladder	reported

Spill-proof urinal for men

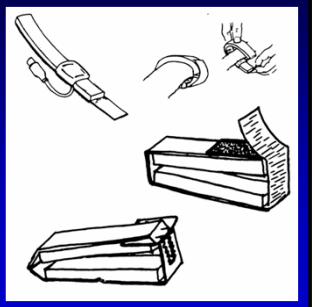
- Useful for a man who needs to void in bed
- Women's version does not work so well in our experience

Male external catheter

- Fits on the penis and is connected to a tube to lead the urine into a container
- Provides a dry environment
- Worn with a leg bag, allow some freedom to do outside activities

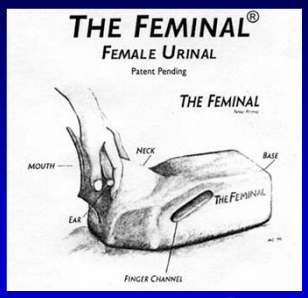
Penile clamp

- Various styles
- Not a fit-and forget solution:
  - clamp must be released every 2 hours to avoid damage to penis
- Can be used as an "emergency" measure just while getting to the bathroom



Female urinal

- The Female urinal is a good design
- It is designed to be used either in a wheelchair or in bed



Freshette

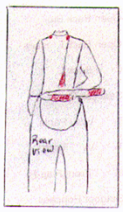
- A female urinal originally designed for hikers and campers
- Useful for women who have difficulty transferring to or sitting on a toilet
- Can be used in bed

Adaptive clothing helps in functional incontinence

Functional, Stylish Nightgowns And Dresses with Open Back Overlap Back

- Indicates snap closure on shoulders
- Indicates Open Back

Garments are designed, manufactured and sold to promote Comfort, Fashion and Durability at an affordable price.

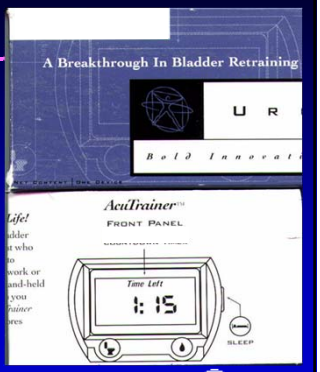


Functional, Stylish Blouses, Shirts And Pants for Men & Women

- Indicates Snap closures on shoulders
- Indicates Open Back
- Indicates Hook & Loop closure on waistband at rear for ease of adjustment (Also available with snap closures on side)

Timing devices

- Helpful for a toileting program
- Smaller timers available from pharmacies (medication reminders) can be used for this purpose



Questions?

Notes

Record your notes from the workshop here

伴随下尿路症状的患者评估

Sharon Eustice
Nurse Consultant
UK

下尿路症状

- ICS 将下尿路症状分为储存、排空[1]
- '…… 症状由患者或照顾者描述'[2]

1 Abrams P, Cardozo L, Fall M, Griffiths D, Rosier P, Ulmsten U, et al. Standardisation of terminology of lower urinary tract function: report from the Standardisation Sub-committee of the International Continence Society. Neurourology and Urodynamics 2002;21:167-178.
2 Haylen BT et al (2009) An International Urogynecological Association (IUGA) / International Continence Society (ICS) Joint Report On The Terminology For Female Pelvic Floor Dysfunction

储存的症状

- 膀胱的过度活动
- 压力性尿失禁
- 急性尿失禁
- 混合型尿失禁
- 持续性漏尿
- 尿急感
- 白天排尿频率增加
- 夜尿
- 夜间遗尿
- 膀胱感觉（正常，增加，减少，缺失，无特异性）

排空症状

- 尿流缓慢
- 尿流中断
- 排尿踌躇
- 用力
- 尿末滴沥

排空症状

- 感觉未充分排空
- 排尿后滴沥

除身体症状外……

- 了解患者的预期
- 在治疗干预期间追踪观察
- 治疗方法应是综合性的
- 临床目标应包括心理方面的内容
- 护患关系的质量

Molineuvo B & Batista-Miranda JE (2012) Under the tip of the iceberg: psychological factors in incontinence; Neuro & Uro 31: 669-671
Welch LC et al (2012) A **Qualitative Inquiry of Patient-Reported Outcomes: The Case of Lower Urinary Tract Symptoms; Nursing Research 61:4 283-290**

引起下尿路症状的主要原因

- 男性：尿液排出受阻、逼尿肌功能障碍、感染、肿瘤以及其它 (膀胱疼痛综合症、 憩室、尿石症)
- 女性：压力性尿失禁、膀胱过度活动、膀胱敏感性增加、排空障碍、盆底器官脱垂和复发性的尿路感染

为什么评估下尿路症状很重要？

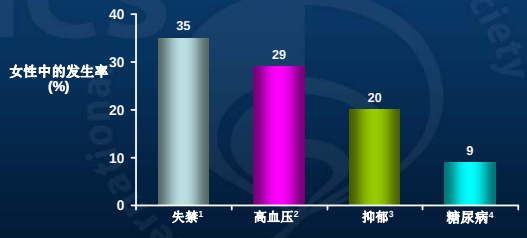
- 发生率高并且有增长趋势
  - *"……基于人口的研究数据显示在年龄等于或大于18岁的男性和女性中有数百万人有储存性下尿路症状或OAB,并且全世界范围内每年直接用于OAB的费用到2018年将达到" €1.4–3.2 trillion"*
- 提高生活质量
- 是个体、照顾者、家庭和医疗体系的负担

Schroder A et al (2010) Guidelines on urinary incontinence European Association of Urology
Abrams et al (2012) **Incidence and Epidemiology of Storage Lower Urinary Tract Symptoms;** ***European Urological Review*****, 2012;7(1):50-4**

在大于20岁的中国女性中的下尿路症状的发生率是37%

Zhang W, Song Y, He X, Xu B, Huang H, He C, Hao L, Li Y. (2005). Prevalence and risk factors of lower urinary tract symptoms in Fuzhou Chinese women. European Urology: 48: 309–312.

比其它慢性疾病发生率更高



1. Hampel C et al. *Urology.* 1997;50(suppl 6A):4-14. 2. American Heart Association. Available at: http://www.americanheart.org/presenter.jhtml?identifier=3024254. Accessed February 16, 2005.
3. Bhatia SC, Bhatia SK. *Am Fam Physician.* Available at: http://www.aafp.org/afp/950700ap/225.html. Accessed February 16, 2005.
4. NIDDK. National Diabetes Information Clearinghouse. Available at: http://diabetes.niddk.nih.gov/dm/pubs/statistics/index.htm. Accessed February 16, 2005.

评估的目的

- 明确诊断
- 除外相关和不相关的情况
- 评估干扰水平
- 制定治疗计划
- 满足临床需求

我们需要评估的……？

- 频率和严重性
- 昼夜的变化
- 诱发和减轻因素
- 患者用于改善症状的措施
- 对生活质量和社会功能的促进

ICS Fact Sheets 2009 http://www.icsoffice.org

是否有以下并发症:

- 疼痛
- 血尿
- 反复感染
- 排空障碍
- 明显的盆腔器官脱垂
- 前一次的失禁手术不成功
- 前一次的盆腔的放射性治疗
- 前一次的盆腔手术
- 可疑的窦道

评估的基本要素

- 排尿日记
- 体格检查
- 尿液分析
- 膀胱残余尿量
- 给药
- 既往病史

排尿日记: 测量下尿路症状的频率和严重性

- 三种不同形式的记录
  - 排尿时间表
  - 频率-容量表
  - 排尿日记
- 建议记录3天的排尿日记 (ICI 4th Edition 2009)
- 膀胱的顺应性

尿失禁评估的系统回顾和评估方法 (HTA Feb 2006)

- 涉及6009篇文献
- 回顾129篇
- 主要的发现:
  - 简单的诊断方法可以在初级、二级医疗中进行
  - 排尿日记是最有效并且简单的调查方法

从排尿日记中我们可以测量的内容

- 白天的频率
- 夜间的频率
- 24小时的频率
- 24小时尿量
- 夜尿量
- 平均排空容量
- 最大排空容量
- 失禁发生的频率
- 尿急感
- 尿垫的使用、重量

FIGURE 2: BLADDER DIARY

This simple chart allows you to record the fluid you drink and the urine you pass over 3 days (not necessarily consecutive) in the week prior to your clinic appointment. This can provide valuable information.
• Please fill in approximately when and how much fluid you drink, and the type of liquid.
• Please fill in the time and the amount (in ml, or ounces) of urine passed, and mark with a cross if you have leaked or used with a "P" if you have needed to change your pad.
(Please find below an example of how to complete this form.)

DATE/TIME DD.MM.YY	LIQUID INTAKE (mls)	VOLUME OF URINE (mls. or ounces)	LEAKS	PAD CHANGE
21.02.06			☆	
0213		150		
0715		350		
0800	Mug coffee 250ml			
0820		60	☆	P
0930	Cup Orange juice		☆	
1000		100		
1200	2 mugs coffee			
1400		300		
1430		20		
1530	Cup of Tea 200ml		☆	P
1600		100	☆	
1800	Cup of Tea 200ml			
1900		100		
2000	Glass Beer 250ml	20		
2030	Glass wine 50ml		☆	
2200				P
2300		150		

SUMMARY
Frequency = 5; Nocturia = 1; Urine production / 24hr = 1250ml;
Minimum voided volume = 300ml; Average voided volume = 125ml.

关于建立
有效排尿日记的研究

Bright E et al (2012) Developing a validated urinary diary: Phase 1 Neuro and Uro 31:625-633

Haylen BT et al (2009) An International Urogynecological Association (IUGA) / International Continence Society (ICS) Joint Report On The Terminology For Female Pelvic Floor Dysfunction page 31

体格检查

- 由专业人员操作
- 有效的知情同意
- 阴道检查
- 直肠检查
- 腹部触诊
- 神经的
- BMI

简易POPQ系统

分度:

- 1度
  - 脱垂的最远端在处女膜内侧，并且距离处女膜至少1cm
- 2度
  - 脱垂的最远端在处女膜内侧或外侧，并且距离处女膜小于1cm
- 3度
  - 脱垂的最远端在处女膜外侧，并且距离处女膜大于1cm，但是不是完全的阴道穹窿或子宫外翻，此时至少有部分阴道粘膜未外翻.
- 4度
  - 全部的阴道穹窿或子宫外翻，子宫和/或阴道最大程度地脱出，伴有全部的阴道上皮的外翻

Parekh et al (2011) Multicenter inter-examiner agreement trial for the validation of simplified POPQ system Int Urogynecol J Pelvic Floor Dysfunct. 2011 Jun;22(6):645-50

尿液分析

应该用于每位患者

- 比重
- pH
- 糖
- 酮体
- 白细胞/亚硝酸盐
- 血液
- 蛋白

尿液分析

- 简单或全部的
- 筛查并非诊断
  - 血尿
  - 糖尿
  - 脓尿
  - 菌尿
- 无症状的菌尿+/- 脓尿是有争议的

Richards CL (2004) Urinary tract infections in the frail elderly: issues for diagnosis, treatment and prevention International Urology and Nephrology 36 457-463; McMurdo M E T & Gillespie N D (2000) Urinary tract infection in old age: over-diagnosed and over-treated Age and Ageing 29: 297-298; Nicolle LE (2001) Urinary tract infections in long-term-care facilities Infection Control and Hospital Epidemiology Vol 22 No 3 167-175;

残余尿量

残余尿量(PVR)

- 没有公认的最小或最大的PVR
- 当出现可疑的膀胱排空减少时，应测量PVR
- 用膀胱扫描仪测量PVR较适用于留置导管
- 单独的阳性结果需要进一步确认

Saaby ML & Lose G (2011) Repeatability of post-void residual urine ≥ 100 ml in urogynaecologic patients International Urogynecology Journal Volume 23, Number 2 207-209

用药

- 一些药物可以诱发或加重症状，比如：治疗高血压的多沙唑嗪
- 38%的美国老年人服用至少一种不适宜的药物[1]
- 多重用药增加危险性
- 注意用药情况可提高治疗的适宜性[2]

1 Bao Y (2012) Inappropriate Medication in a National Sample of US Elderly Patients Receiving Home Health Care Journal of General Internal Medicine http://www.springerlink.com/content/p2658x82w5552783/ accessed 18 June 2012

2 Lopez MT et al (2012) A review of the medication in polymedicated elderly with vascular risk: a randomised controlled trial Atencion Primeria http://www.ncbi.nlm.nih.gov/pubmed/22341703 accessed 19 June 2012

病史

- 包括关注的问题
- 明确最需解决的症状
- 使用问卷调查有助于了解更多信息（困惑、症状和生活质量）
- ICIQ 问卷 (Grade A)
  - I-PSS (Grade B)

http://www.iciq.net/

询问患者出现压力性尿失禁和急迫性尿失禁的情况

在上一周，您是否在以下情况时，有偶尔的漏尿

1. 在进行体力活动，比如咳嗽、打喷嚏、举重物或锻炼时？
2. 一种突然、强烈的排尿感觉，并且您来不及如厕？

Culligan PJ, Heit MD. *Am Fam Physician.* 2000;62:2433-2446, 2447, 2452.

其它调查……

- **尿路成像（超声或X线）不是常规检查，除非有血尿或复杂的排空障碍**
- **尿路内镜检查-不是常规检查，除非有血尿或特殊的症状，如膀胱疼痛**
- **尿动力学研究-患者对保守措施无效，或治疗昂贵并有潜在的危险，或症状影响了患者的生活质量**

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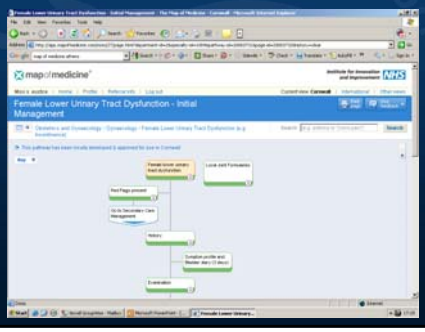
Map of Medicine UK



案例研究：压力性尿失禁

- 55岁女性
- 在咳嗽、打喷嚏、大笑和锻炼时有漏尿
- 偶尔在到浴室的途中有漏尿
- 严重程度轻重不一，和活动无关
- 有时有尿急感，与咖啡因摄入有关
- 早晨的排尿频率是每2小时一次
- 否认夜尿
- 每日使用3-4张尿垫，饱和度为
- 否认在性交过程中有漏尿或尿急感，但由于性交困哪而回避性交
- 大便规律

病史

- 既往病史
  - 5年前由于癌前细胞和纤维瘤行子宫切除术
  - 裂空疝
- 目前用药
  - 维生素 (非处方药)
  - 奥美拉唑

体格检查

- 腹部检查
  - 由于前次手术形成的已愈合的耻骨上的疤痕
- 外生殖器: 萎缩性阴道炎、尿道炎
- 盆前检查未见异常
  - 咳嗽引发的漏尿
- 尿液分析： pH 5, 尿液浑浊, 其它参数阴性

盆底肌肉评估

- 提肛肌收缩评估达3级（最高5级）
- 很难维持盆底肌收缩超过3秒，但可再次收缩
- 医务人员帮助患者提高收缩的持续时间
- 可使会阴提起

诊断

- 混合性尿失禁
- 尿急
- 尿频
- 阴道炎

治疗计划

- 盆底肌康复项目
  - 快速并且维持收缩
  - 8次练习，每日3次，在3种不同的体位下（坐位、站位和平卧位）
- 膀胱训练/尿急抑制策略
  - 深呼吸
  - 快速收缩
- 液体调整
  - 减少膀胱刺激（比如，含咖啡因饮料）
- Vagifem® (雌二醇) 阴道雌激素片
- 后续计划

后续计划

- 改善漏尿总量，特别是急性尿失禁
- 使用1~2 块尿垫
- 进行盆底功能锻炼
- 改善肌肉强度、容量和耐力
- 通过减少饮食中的咖啡因和泡沫饮料的摄入，控制尿急感
- 轻度改善尿频
- 改善萎缩性阴道炎
- 再次诊断：混合性尿路失禁的处理、尿急感和尿频

提高对下尿路症状的认识

- 下尿路症状可以是动态的，不是静止的
- 在初级保健过程中需要增加对排尿症状的询问
- 症状可以通过临床病史、体格检查、尿液分析和简单的检查进行评估
- 治疗方法包括物理和行为干预、调整生活方式以及药物治疗
- 下尿路症状的评估需要系统地进行，并且为管理患者的症状提供有力的基础

谢 谢

（请 提 问）

压力性尿失禁

Workshop 8: Conservative Management of Incontinence

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内容

1. 什么是压力性尿失禁
2. 压力性尿失禁的概况
3. 危险因素和与年龄相关的变化
4. 盆底肌肉的解剖和功能
5. 压力性尿失禁的保守干预
6. 对老年人的干预措施
7. 理疗干预措施

失禁和压力性失禁的定义

- **失禁：是指尿液或大便不自主地漏出**
- 失禁是一个症状不是一个诊断 (如：跌倒、头痛、意识不清)-直到明确诊断
- **压力性（尿）失禁：是指尿液在用力、活动（比如：体育活动）、打喷嚏或咳嗽时不自主漏出**

(ICS 2005 www.icsoffice.org)

压力性失禁较常见

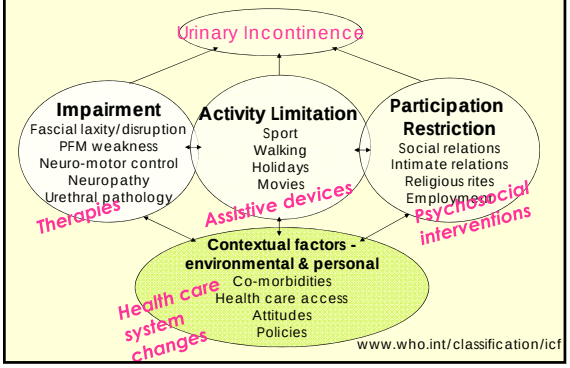
- 流行性：根据队列研究，发生率在 5% - 60%
  (Sherburn et al 2001, Chiarelli et al 1999)
- 就诊率最高达40%
  (NCMS 2003)
- 80% 的患者是女性
  – 由于生育的影响
  (CFA 2011)

压力性失禁

尿道的闭合压力过低

增加的腹部压力（咳嗽、打喷嚏等）引起尿液漏出

ICF 对压力性失禁的分类、复杂情况和干预措施



压力性失禁的病生理

尿道括约肌功能不良

盆内筋膜受牵拉或受损

Levator Ani肌力弱

会阴部神经病变

危险因素

- 性别，女性
- 肥胖
- 怀孕/自然产
  - + 巨大儿>4kg,
  - 工具助产: 产钳
  - 第二产程长：>2小时
- 基因 – 胶原功能弱
- 尿路感染–急性

其它危险因素

- 老年
- 慢性牵拉– 便秘、抬举、咳嗽
- 更年期
- 子宫切除
- 神经性功能不良
- 意识和功能障碍
- 职业 – 长时间站立、抬举
- 体育活动 –抬举类的体育运动
- 医疗 – 结缔组织病，肺、神经、肠道疾病，腰椎或低估神经体征
- 糖尿病
- 用药 – 抗抑郁药，利尿剂

(Abrams et al ICI 2005)

年龄相关的膀胱功能变化

- 结构变化-胶原、前列腺、血流
- 激素-雌激素、抗利尿激素
- 膀胱功能:
  - 容量、敏感度、流速、闭合压力减小
  - 残余尿、感染、逼尿肌收缩增加
- 减退的功能-活动、灵巧度、视力
- 神经心理-痴呆、抑郁
- 多发病变
- 药物&相互作用

盆底肌和括约肌功能

闭合尿道（和肛周）括约肌

- 内部（不自主）括约肌
  - 在膀胱颈
- 外部（自主）括约肌
  - 在尿道中间

膀胱括约肌和盆腔器官

(Corcos & Schick 2001)

尿道粘膜

- 粘膜包括：
  - 尿道粘膜
    - 胶原
    - 弹性蛋白
    - 分泌腺
  - 上皮
    - 老年女性出现角化
- 粘膜下血管丛
  - 雌激素依赖
  - 对于闭合很重要

尿道横断面图

盆底功能

1. 支撑盆底器官
   -DeLancey '船模型'
   -当腹压增加时，抵抗其向下的移位

2. 用于适应压力和姿势改变
   -快速和有力回应
   -可以放松

DeLancey's 船模型

- 船=器官
- 锚=韧带
- 水=盆底

什么是盆底肌?

- 盆底肌（提肛肌）是薄层肌肉
- 强度大小依靠其附着的筋膜
  其有较大区别：
  – 和肌纤维相比，筋膜的数量
  – 筋膜的胶原成分

神经支配：
– S2,3,4, 经肛周神经从下发出
– 直接从骶丛由上发出

盆腔矢状面图：Levator ani 肌

侧前观盆底

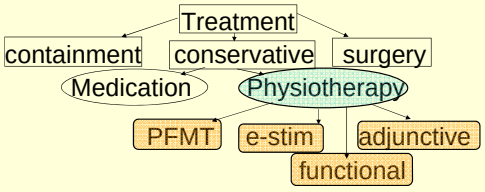
Netter

上观盆底肌

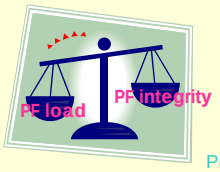
在盆底肌收缩过程中...

出现:
- 尿道关闭
- 盆底肌肉的前、上运动
- 抵抗器官向下移位

盆底和下尿路功能不良的管理



对于失禁的PFM 练习–一种平衡



肥胖
高强度练习
咳嗽
便秘举重物

PFM 功能
身体姿势
活动
盆腔手术
盆腔神经病变
生育/类似情况
年龄增加

正确收缩PFM的能力

- > 30 % 不能收缩 (Benvenuti et al 1987, Bø et al 1988, Hesse et al 1990)
- 只有49%在收缩过程中提高尿道压力 (Bump et al 1991)
- 25% 出现舒张 (Bump et al 1991)

PFM 训练 –盆底肌练习

- 原则：
  - 设定目标
  - 选择环境中的信息，用于提示练习
    - 选择练习的姿势
    - 提供意象
  - 开始活动
  - 提供反馈

技巧

- 在出现动作前（如：咳嗽），先收缩盆底肌，只收缩这1次，不用连续收缩
- 1周后重新测试，73%在用力咳嗽时减少了尿液流出

(Miller et al 1998)

PFM 训练的目的:

正确收缩-在教授正确的运动技巧后

然后-加强训练，以使神经功能增强

坚持不懈

有效训练的建议 (Haskell et al, ACSM 2007)

- 8-12 次慢速并且最大程度地收缩（有助于强度和力量的提高）
- 3 组
- 2-3 (4) 天/周days a week
- > 5 月

加强盆底肌力的生理优点?

- 增加肌肉组织的容量
  - 盆底
  - 外部/自主尿道括约肌
- 促进神经肌肉控制
  - 减少疲劳
  - 在功能活动时增加反射性收缩
- 减少胶原组织的改变
  - 主要是遗传的不同

“盆底肌训练被列为应对女性压力性、急性或混合性尿失禁的第一个措施”

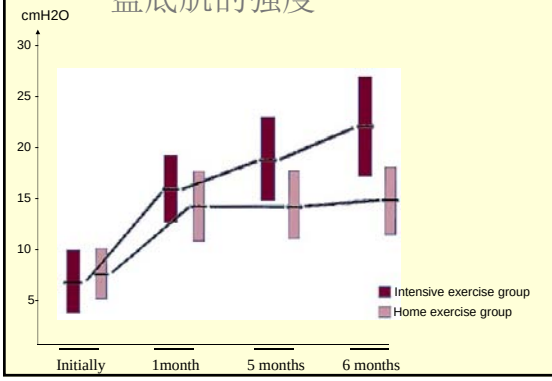
Level 1a evidence, Grade A recommendation
3rd International Consultation on Incontinence

Abrams et al ICI 2005

Condition	Intervention	Level of evidence	Grade of recommendation
Urinary incontinence	PFMT	1	A
	Bladder training	1	A
	Lifestyle modification		
	•Weight loss	2	A
	•Moderate exercise	2	–
	•Reduction in caffeine intake	2	C
Pelvic organ prolapse	PFMT	2	B
Surgery for pelvic organ prolapse	Peri-operative PFMT	2	C
Surgery for SUI	Peri-operative PFMT	2	B – C

Hay-Smith et al 2009

盆底肌的强度



结论 (Bø et al 1990)

- 经尿垫使用情况、尿动力和女性自我感觉评估，6个月的PFM训练对于治疗压力性尿失禁是有效的
- 加强训练和减少训练相比，其差异有统计学意义
- 训练的质量和监督对于成功是重要的
- 效果为什么不是100%呢？

PFM 训练结果- 治愈 56 - 84%

Operational definition of cure
Poorly trained practitioner
Chronic straining – Lifting, constipation
Dosage too low
High parity
Not motivated
Obesity

Why not close to 100%?

Dorsal column neuropathy, Early dementia
Low back pain
Rheumatological disease
Different aetiologies
Respiratory disease
Low flow rate, urethral or bladder pathology

Bø et al 1999, Mørkved et al 2001, Neumann et al 2005, Wong et al 1997

PFM 测量
肌力分级: Oxford 量表（修订）

- 0=无可触及的收缩
- 1=颤动
- 2=轻微力量，不能抬举
- 3=中等力量，可以抬举
- 4=较强力量，可以较好抬举
- 5=正常，可以对抗增加的阻力

教授

- 说- 收缩,
- 视 – 解剖图,
- 感知运动 – 自我感觉,

应用

- 说 -
- 视 -
- 感知运动-

意象

练习时的体位

结果测量

反馈

- 表现- 在练习中的
  - 比如：“向上”与“向前”
- 结果-在练习后，预定目标完成情况
  - 动机，奖赏
  - 比如：肌肉长时间收缩引起的疲劳
- 逐渐减少反馈，以降低对理疗师的依赖
- 动机变得更内化而不是由于外界原因

对于完全康复…

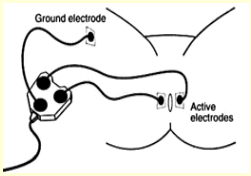
- 当前考虑？
  - 高质量的盆底肌肉训练
- 功能角度考虑？
  - 在日常生活中
  - 在动作开始前收缩，“技巧”
- 总体考虑？
  - 神经肌肉康复
  - 生活方式的因素也需要被考虑
    - BMI
    - 慢性咳嗽，背痛等

辅助治疗 (1)

- 电刺激
  - 用于非常弱的盆底肌肌力或很差的肌肉运动感觉
    - 25-35 Hz 产生抽搐性的收缩
    - 5-10Hz 可产生肌肉运动感觉
  - 用于抑制过度的逼尿肌（膀胱平滑肌）
    - 5-10Hz

辅助治疗(2)

- 生物反馈
  - 压力测量计
  - 肌电图



辅助治疗(3)

- 阴道（圆锥）承重
- 阴道内部装置
- 教育-日常活动，行为改变/对于急性失禁的膀胱训练
- 可用髋部肌肉代替

患者需要知道的…

- 自己的问题是什么
- 可能的原因
- 可能的治疗
- 预期的治疗结果
  - 时间表
  - 疗程
  - 居家注意事项
  - 医务人员对患者的预期
  - 如果治疗不成功，其它可能的选择

训练有素的医务人员
重视、监控、有目的地进行盆底肌肉训练
同时明确:
如何锻炼
测量工具
身体的协同
合并症
是一个多方合作的小组 “管理项目”？

Good clinicians can take the *stress* out of stress urinary incontinence

盆底肌肉训练是有效的
功能性的
没有副作用
和手术相比更经济

谢 谢 ！

（请 提 问）

尿急感和急迫性尿失禁

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ICS Workshop Conservative Management Beijing 2012

目标

- 尿急感和急性尿失禁的定义
- 回顾流行病学特点和相关病生理知识
- 讨论保守性干预措施的

膀胱与脑的联系

Diagram to be inserted

膀胱排空的控制

- 在前脑和桥脑的膀胱排空调节部分（脑干）之间有联系
- 脑与下尿道、某些反射性控制之间的信号传递由脊髓完成
- 下尿道有自主神经（不随意交感和副交感神经）和体神经（随意神经），调节膀胱的储存和排空

膀胱排空的控制

- 膀胱的存储和排空包括自主性和非自主性（反射性排空）
- 中枢（脑）的控制类似触发开关

疾病可以通过以下方式影响膀胱排空

- 中枢控制（比如：中风、痴呆）
- 局部神经控制（比如：糖尿病膀胱病变）
- 解剖结构、下尿路的完整性（比如：子宫脱垂，或BPH）

尿急感和急性尿失禁

- 尿急感和急性尿失禁出现膀胱储存异常的症状
- 其它膀胱储存异常包括尿频和夜尿

定义：尿急感

- 突然的排尿欲望，并且难以克制

Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21,* 167-178.

定义：急性尿失禁

- 主诉在急症时或急症后发生的不自主的尿液外漏

Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21,* 167-178.

其它症状

- 有时我们观察到压力性尿失禁同时伴随尿急感和急性尿失禁
  - 这种情况称为混合性尿失禁

其它症状

- 有时我们观察到白天尿频和夜尿同时伴随尿急感和急性尿失禁
  - 这种情况称为过度反应膀胱症

其它症状

- 有时我们观察到膀胱收缩不良同时伴随尿急感和急性尿失禁
  - 患者虽然出现频繁地急性排空症状，但膀胱排空不良
  - 尿动力学试验显示，未控制的逼尿肌（膀胱收缩）伴随排空后的大量的残余尿量

易出现尿急感和急性尿失禁的人群有哪些？

- 随着年龄的增加，其发生率增加
- 二个大样本研究显示，成人中过度反应膀胱症的发生率是
  - 6%（ 40-44 岁）, 35%（大于75岁）
  - 女性比男性更早出现症状

老年，尿急感和急性尿失禁

- 尿失禁**不是**老龄化的结果
- 但是……可能由于一些慢性的情况使下尿路的功能受到影响，老年人更容易出现尿失禁

什么引起尿急感和急性尿失禁？

- 可以是短暂性的或永久性的
- 短暂性-尿失禁和某个急性的情况有关，并随着急性情况的解决而消除
- 永久性-尿失禁在某个急性病或所有和短暂性尿失禁有关的因素都消除或得到控制后仍存在

短暂性尿失禁的原因：

- 液体摄入（量，种类，时间）
  - 一些人发现咖啡因和酒精刺激膀胱
- 粪便嵌顿导致膀胱排出通路受阻
- 老年女性阴道萎缩（雌激素缺失）
- 药物（比如：利尿剂）
- 一些情况下引起的过量尿液排出，比如：糖尿病，高钙症，甲状腺低下
- 尿路感染

永久性尿失禁的原因：

- 中枢控制性的（比如：中风，痴呆）
  - 前脑和脑桥之间的联系受到干扰
- 局部神经控制性的（比如：糖尿病膀胱病变，帕金森综合症）
- 自主控制受损
- 阻塞性（比如：男性的BPH）

中风

- 在中风后膀胱会出现一段时间的松弛
- 长期看，中风可以导致尿急感和急性尿失禁
- 中风后的运动和神志障碍使失禁复杂化

痴呆

- 老年痴呆、血管性或其它痴呆
- 和尿急感和急性尿失禁有关
- 认识障碍和运动不能（难以完成任务），使如厕过程变复杂

糖尿病

- 由于感觉和运动神经元病
- 经典定义：膀胱感觉减弱，膀胱收缩无力以及残余尿量增加
- 常常有一系列症状包括尿急感、尿频、夜尿和尿失禁
- 糖尿病控制不良导致的多尿，可恶化尿失禁的情况

帕金森综合症

- 帕金森综合症的部分非运动性症状
- 由于自主神经功能不良-自主神经系统功能受损
- 症状包括尿急感、尿失禁、膀胱收缩不良，增加的残余尿量
- 在晚期出现的认知和运动障碍使患者出现失禁

多发硬化：

- 可导致神经性的逼尿肌过度活动
- 也可以导致膀胱收缩不良

阻塞性：

- 对于男性，由于良性的前列腺增生导致的阻塞可以引起尿急感和急性尿失禁
- 这种情况即使在前列腺手术后仍可以持续存在

生活方式对膀胱过度活动的影响

- 肥胖
- 吸烟
- 酗酒
- 咖啡因
- 合成甜味剂

尿急感和急性尿失禁的后果

- 对生活质量的不良影响
  - 影响睡眠
  - 严重的尿急感（发生在到达目的地的时侯）

尿急感和急性尿失禁的后果

- 增加跌倒的危险
  - 尿急感和急性尿失禁增加老年人跌倒的危险
  - 其它有关膀胱过度活动的症状（夜尿，尿频）也增加跌倒的危险

保持排尿正常的条件？

- 下尿路功能正常
- 意识正常
- 刺激
- 身体功能（比如：手的灵巧性, 运动/移动功能）

短暂性尿急感和尿失禁的管理

- 治疗原发疾病或健康问题
- 规律排尿
- 移开如厕的障碍物、协助移动
- 大便管理
- 充分液体摄入
- 保护皮肤
- 必要时调整药物

永久性尿急感和急性尿失禁的管理

生活方式– 好习惯

- 减少咖啡因、 合成甜味剂
- 限制酒精摄入（类似利尿剂）
- 保证充分液体摄入
  - 每日1500-2000ml
  - 白天多饮水
- 规律排空膀胱（白天每2-4小时一次，注意不要过度！）
- 戒烟
- 如果体重肥胖，应减轻体重

规律如厕

- 每2-3小时规律如厕（清醒时）
- 目的是协助失禁患者保持干燥
- 应特别注意有意识或身体功能障碍的患者

促进排空

- 在患者需要的时候，规律询问患者是否需要排空并协助如厕
- 目的：减少失禁的发生
- 适用于有完整认知或中度障碍的患者
- 不适用于有严重认知障碍的患者（不能感知排空需求的）

盆底肌肉锻炼

- 盆底肌肉收缩锻炼可以抑制由逼尿肌（膀胱）收缩引起的尿急感
- 通过规律的盆底肌肉锻炼加强盆底功能有助于管理尿急感和尿失禁

尿急感的抑制

- 指导患者有尿急感时不要急于如厕，这样有助于触发逼尿肌收缩并增加腹
- 慢慢反复收缩盆底肌肉直到尿急感消失
- 在尿急感停止后慢慢走到洗手间，如厕

膀胱的再训练

- 教会患者依据时间规律排尿，而不是有尿急感就排尿
  - 盆底肌肉收缩以减轻尿急感 (尿急感的抑制)
  - 每次排尿的间隔时间逐渐增加
- 对于有尿急感的患者，目的是通过减少排空频率形成正常的排空规律
- 患者应意识清楚并且有刺激

护理注意事项：抗胆碱能药物的副作用

- 抗胆碱能药物被用于治疗尿急感和尿失禁
- 副作用：口干、尿潴留、潮红和意识障碍
- 老年患者，特别是有痴呆症的患者更容易出现这类药物的副作用
- 注意监测尿潴留和意识障碍

其它干预措施：

- 对于有行动障碍的患者，提供助行用物 (手杖，助步车)
- 失禁垫和相关物品
- 皮肤保护剂（清洁和隔离膏）

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尿潴留
&膀胱排空不充分

ICS Workshop: Conservative Management
Beijing 2012

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目 标

- 定义
- 回顾下尿路症状
- 识别原因
- 探讨管理方式

定义

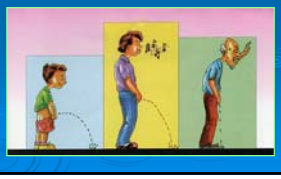
- “尿失禁是指尿液不自主流出”
- ICS 建议使用“尿潴留”为专业术语

Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21,* 167-178

定义

“感觉到不充分地排空……

一种出现在排尿后的感觉。”



Abrams, P. et al. 2002. The standardisation of terminology of lower urinary tract function. *Neurourology and Urodynamics, 21,* 167-178

排空过程

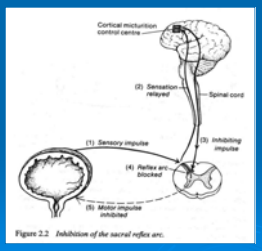


Figure 2.2 *Inhibition of the sacral reflex arc.*

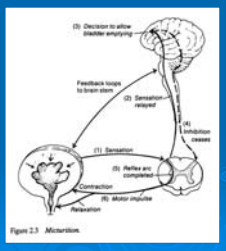


Figure 2.3 *Micturition.*

Norton, C 1996 Nursing for Continence p. 14

储存症状

- 膀胱敏感性：
  - 增加、减少、消失、无异常
- 如果存在膀胱敏感，可以出现
  - 夜尿
  - 尿急感
- 失禁-可能持续
  - 夜间和/或白天

排空症状

可以包括:

- 排尿踌躇
- 用力
- 尿流:
  - 缓慢
  - 分叉
  - 中断
- 尿末滴沥

排尿后

症状

- 感觉排尿不充分
- 排尿后滴沥

原因

膀胱出口阻塞：

- 前列腺肥大
- 明显的盆腔器官脱垂
- 肿瘤
- 狭窄
- 粪便嵌顿

原因

- 膀胱功能不良
  - 神经性的
    如：脊髓损伤、糖尿病、多发硬化
  - 用药

管理目标

- 预防尿潴留
- 治疗潜在的疾病
- 规律排空膀胱
- 减少
  - 感染危险
  - 失禁
  - 尿频
  - 尿急
  - 皮肤损伤
- 提高生活质量

管理方式

- 充分评估
- 是否需手术
- 是否需用药
- 保守性干预措施

保守性干预措施

考虑：

- 体位变化后排尿
- 反射性排尿
- 按压耻骨上方排尿

何时需要留置尿管？

- 急性和慢性尿潴留
- 暴露在尿液中引起严重的皮肤损伤 2^0
- 姑息治疗
- 严重的尿失禁，并且其它干预措施无效
- 评估后决定 / 治疗

导尿

通过尿管排空膀胱

- 间歇（留置/拔除）
  - ISC 间歇自我导尿（由患者操作）
  - IC 间歇导尿（由医务人员、照顾者操作）
  - CIC 清洁间歇导尿
  - AIC 无菌技术

间歇自我导尿 (ISC) / 尿道扩张：需要考虑的患者因素

- 膀胱功能-需要留置尿管/扩张
- 个人意愿/知情同意
- 活动性/灵活性/力量
- 性生活/生活方式
- 身体/心理状态

留置尿管 (IDC) 经尿道和耻骨上 (SP)

需要考虑的因素：

- 长期使用
- 舒适性
- 减少膀胱颈损伤
- 痴呆
- 性生活
- 患者意愿
- 排泄试验
- 尿道阻塞

留置Foley* 尿管

- 技巧
- 引流孔
- 球囊
- 管腔
  - 乳胶
  - 硅酮

*designed by Dr Foley in conjunction with Davol in 1930s

尿管成分

- 间歇性的
  - PVC
  - 有润滑表层的PVC
- 短期的
  - 有弹性硅酮表层的乳胶管
- 长期的
  - 有亲水性/银表层的乳胶管
  - 硅酮管
  - 有抗微生物表层的管

乳胶和硅酮

被包裹的乳胶

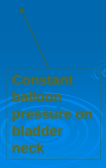
- 刺激性小
- 耐受性高
- 圆形引流管腔
- 引流孔较大
- 柔软、易弯曲且平滑

硅酮

- 刺激小、耐受性高
- 新月形管腔，管壁薄
- 引流孔小
- 由于制造工艺的特点，表面不光滑
- 稳定性好
- 材料具有高渗透性

尿管的选择

- 目的和留置时间
- 成分
- 型号
- 长度
- 气囊
  - 通常5 - 10ml, 血尿30ml
  - 只使用水充盈气囊
- 技巧: 短、直、曲线



留置尿管的记录

- 留置尿管的原因
- 经尿道留置尿管/经耻骨上留置尿管
- 置管难度
- 导出的尿量
- 尿管的种类和型号、球囊的型号
- 尿袋的种类
- 更换的日期和方式（如：家庭护理）
- 详细记录

尿液袋

- 腿部
- 腹部
- 夜间使用
- 管长
- 管孔
- 无菌
- 可顺利引流
- 开关
- 容量
- 是否有“阀”- 考虑

引流袋？ Drainage

- 更换引流管（每日更换至另一侧）
- 不要影响引流
- 固定在膝关节处
- 确认患者可打开尿袋的开关
- 在出口处接夜间可以使用的尿袋

留置尿管的长期并发症

- 尿道损伤的危险/坏死
  2^0 压疮、牵拉
- 通常较晚被发现

问题

- 渗漏
- 疼痛/不舒适
- 尿液-沉淀物、血、血凝块、结石
- 尿路感染
- 便秘
- 尿管脱出
- 炎症/癌变

间歇自我导尿中的感染

- 开始使用是尿路感染很常见
- 用物清洁
- 充分治疗感染
- 检查原因，如结石
- 如果持续发生，采取预防措施
- 可能需要增加间歇自我导尿的频率
- 避免残余尿量 >500ml

尿管相关的尿路感染

- 监测尿中细菌数
- 如果出现症状及时治疗
- 单一尿路感染
  - 治疗一周后复查

  反复发生的尿路感染
  - 泌尿科就诊
  - 可能是结石、憩室炎
- 保证清洁
- 保证液体入量

预防相关问题

- 选择适宜的尿管
- 减小损伤、血尿、疼痛
- 充足的入量
- 预防便秘
- 常规清洁-皂液和水

何时更换尿管

- 是否需要更换尿管
- 评估患者
  - 尿液的性状
  - 出现问题的可能性
- 更换时间（长期）
  - 通常 6 - 8 周
  - 如果可能4周
  - 如果置管10 -12 周, 可能增加污垢和感染

尿液成分

- 血尿、血凝块
  - 评估患者是否接受抗凝治疗
  - 检查是否出现尿路感染
  - 检查是否出现损伤
- 沉淀物
  - 增加液体入量
  - 增加管腔和引流
  - 袋的型号可以改变pH值

疼痛和不舒适

- 膀胱痉挛/逼尿肌过度活跃
  - 抗毒蕈碱类药物
  - 检查球囊
  - 型号、膨胀程度、位置
- 查看尿管
  - 型号、成分、位置
- 萎缩/炎症/感染
- 尿管的受压部位

肠道

- 便秘或大便嵌顿也引起：
  - 膀胱痉挛
  - 尿液外流
  - 阻塞
- 便秘时，用力排便，可以导致尿管脱出
- 引起污染，特别是女性

患者意识不清

- 如果有拔尿管的倾向，尽量避免留置尿管
- 考虑由照顾者给予间歇导尿
- 增大尿管和球囊的型号，效果不佳
- 妥善固定尿管，注意衣物的安全性
- 如果曾出现拔尿管的情况，检查有无狭窄出现（损伤后）

谢谢！

- 请提问？

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失禁产品；容器和装置

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October 16, 2012
ICS, 2012
Beijing, China

Thank you to ICS for travel award funding

提纲

- 选择产品考虑的因素
  - 皮肤护理和异味控制
  - 清洁
  - 潮湿和屏障
- 女性产品
- 男性产品
- 女性和男性产品
- 机械性和其他设备

选择产品需考虑的因素

- 失禁的类型和严重程度
- 个人的功能状态
- 护理用品
- 使用的方便性
- 可购买到的产品和产品的费用和
- 耐久性

Morrison, 2001

选择产品需考虑的因素

- 需要使用的时间长短
- 吸收性/饱和容量-干爽
- 个人的倾向-舒适
- 衣物对产品的遮盖性
- 噪声情况
- 异味控制

Morrison, 2001

失禁相关的皮肤炎-IAD

- 管理的目标

规范皮肤护理

产品吸收渗出液

控制过度潮湿

治疗继发感染

Gray et al 2011

严重的皮肤刺激-潮湿相关的皮肤损伤 (IAD)

- 病例-H女士
  - 严重失禁
  - 肥胖
  - 使用碱性皂
  - 使用多个尿垫
  - 人工合成材质制成的内衣
  - 真菌感染

Gray et al, 2011
Gray et al, 2007

皮肤护理

- 良好的皮肤护理可以预防组织的损伤
- 良好的皮肤护理需要
  - 清洁
  - **保湿**
  - **防护**
- 目前有集清洁、保湿和防护于一体的产品

皮肤护理的清洗物

- 如果皮肤正常-使用一般皮肤清洗布
- 使用柔软的清洗布避免皮肤损伤
  - 不要重复使用同一块布

Keegan, 2012

- 清洁和保护同时进行

清洁

- 皮肤的pH值是4.5 – 6
- 选用与皮肤PH值接近的柔和的皂液
- 避免条状肥皂- 碱性

Voegeli, 2010

- 避免酒精类产品

清洁

避免:

- 滑石粉和凡士林（油类）
  - 粉可以形成团，再加上皮肤皱褶中的潮湿，有真菌感染的危险？

Black et al, 2011

- 含酒精的产品-使皮肤干燥
- 使用含锌产品-是否出现过敏

异味的控制

如果出现尿液的异味:

- 增加液体摄入量
- ***查看是否有感染***

清洁环境:

- 白醋和水

保湿？

使用水类保湿产品:

- 甘油
- 甘露醇
- 乳酸钠或乳糖

防护的准备

- 提高皮肤的防护功能
- 皮肤薄的患者最好使用失禁产品
- 注意锌过敏的症状
- 可选的新产品
  - 硅酮材质的聚合体
    - Beeckman et al, 2011

女性产品

- 10-25% 月经护垫被用于失禁护理
- 月经护垫设计的初衷不是吸收尿液
- ***不能控制异味***
- 月经护垫不建议作为尿失禁护理的常规用品

轻度的失禁

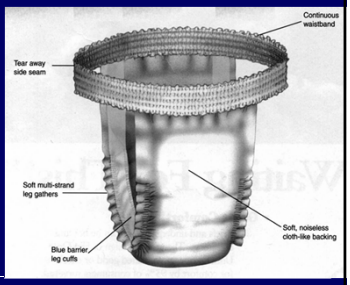
程度分级:

- Light (½ c)
- Regular (¾ c)
- Extra (1 c)
- Extra Plus (1¼ c)
- Ultra (1½ c)
- Ultra plus (1¾ c)

(1 cup = 250 ml)

中度的失禁

- 产品具有弹性围腰，并且可滑动
- 容易穿、脱
- 非常舒适
- 高度吸收性
- 适用于夜间使用



重度的失禁

- 保护性内衣-最新产品
- 穿着方式类似一般的内衣
- 可在夜间使用
- 吸收量有750-1000 mls!

重度的失禁

适宜性的判断：

- 有弹性围腰-穿、脱
- 有4-6条带子-可进一步收紧
- 与腿部接触的部分有弹性
- 增加衬垫可以增强吸收性
- 可以在夜间使用

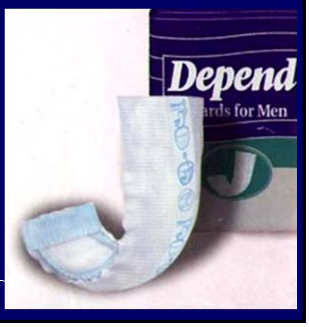
可重复使用的产品

- 一些患者由于环境的原因，愿意选择重复使用的产品
- 重复使用的产品的吸收性会降低（特别是在清洗几次以后）
- 衬垫可以用于提高吸收量，特别是在夜间

男性产品

男性产品

为男性提供支持

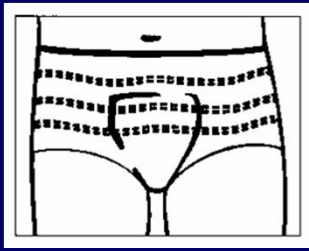


中度至重度失禁

- 垫和裤系列-2 片系统
  - *Keegan, 2012*
- 男性和女性内衣潮湿-兜会吸收更多液体
- Boxer short 适用于男性

网状裤

- 许多公司生产网状裤
- 网状裤可以和其它一些产品联合使用



产品面临的挑战

夜间容量

- 可能需要不止一个产品

产品面临的挑战

特体的患者

- 有特殊的产品
- 现存的产品可以做修改
  - 比如：弹性的伸缩

可定制

子宫套的使用？ Pessary use

- 传统上，子宫套被用于脱垂的情况
- 子宫套成功用于尿失禁 (>70%)
- 关于子宫套用于失禁情况的研究较有限

垫子

可重复使用的

- 椅子保护垫
- 床保护垫

垫子使患者在夜间感觉安全，并且使照顾者的工作更容易

子宫套？ Pessaries

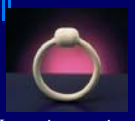
- 放置于阴道以支撑盆腔肌肉、膀胱和子宫
- 用于女性的压力性、急性和混合性失禁
- 当外科干预
  - 不适宜
  - 不期望
  - 不可能

子宫脱垂

- 病例- D 女士
  - 65岁
  - 尿潴留-充盈性尿失禁；Foley 尿管
  - 符合 Gellhorn 3"?
  - 排空良好-残余尿量低于 50 mls

通过子宫套减少脱垂

用于失禁的子宫套



Incontinence ring

Incontinence Dish

Incontinence dish with support

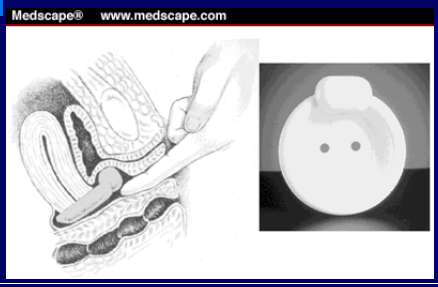
Support & knob Pessary

失禁的处理

增加尿道闭合的压力；支撑膀胱颈

- 适用于女性的压力性、急性和混合性尿失禁

失禁的处理



子宫套使用的适应症

- 除了其他的保守治疗
  - PFMT, 生活方式的改变
- 术前的临时干预
- 手术失败后的失禁
- 术前诊断有潜在失禁
- 患者希望使用

子宫套使用的禁忌症

- 阴道感染的活动期
  - 在使用子宫套前治疗
- 未明确诊断的阴道出血

合适的子宫套

- 试用和问题
  - 多个种类和尺寸
- 应该舒适……“我感觉不到它”
- 应该能够排空膀胱-检查残余尿量

检查是否适宜

- 在阴道壁和子宫套之间必须有一指空隙
- 必须能够排空膀胱
- 在咳嗽或腹压增加时子宫套不下滑或脱落

后续护理

- 当患者可以自行置入或移除子宫套时，给予患者健康指导
- 在最初的2-4周，应连续观察
- 复查间隔
  - 自我照顾情况下：每6-12个月
  - 有照顾者情况下：每3-6个月

后续护理

- 用扩张器检查擦伤、溃疡和感染
- 用皂液和水清洁子宫套后，重新置入
- 治疗感染
  - 取出子宫套2-3周，并使用抗生素膏和/或阴道雌激素膏治疗

并发症

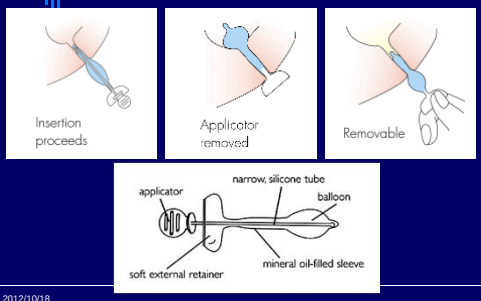
- 阴道分泌物和异味
  - 可能由于腐蚀造成
  - 可以使用 Trimo - San jelly 治疗
- 不舒适
  - 可能是由于不适宜的子宫套造成
- 阴道擦伤或溃疡
  - 可能由于子宫套过大或组织缺乏雌激素造成
- 罕见
  - 阻塞排尿/排便
  - 嵌入（失访）

尿道置入物/栓

有几种类型

- 用于女性压力性尿失禁

尿道栓

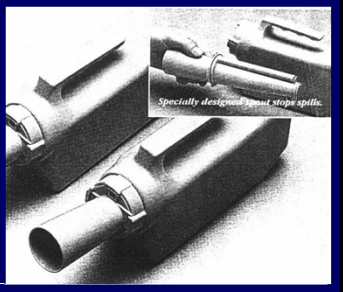


使用尿道栓存在的问题

- 不易使用
- 副作用发生率高
- 不能用于以下情况
  - 免疫抑制
  - 既往复发/慢性膀胱感染
  - 尿道瘢痕/手术
  - 肾脏疾病
  - 血液稀释剂
- 不能用于急性失禁

渗漏-男性尿壶

- 适用于需在床上排尿的男性
- 女性使用尿壶，效果不如男性



男性外置尿管；替代尿垫使用

Keegan, 2012

- 适合患者阴茎，并且通过管子将尿液引入容器中
- 提供干燥环境
- 配有腿部的袋子，使患者可以自由进行户外活动

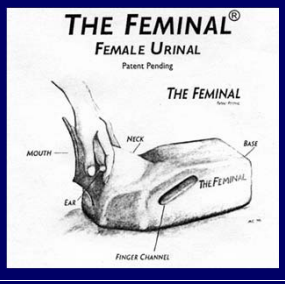
阴茎夹

- 多种类型
- 夹子必须每2小时打开一次，以避免阴茎损伤
- 在沐浴时作为紧急干预措施

女性尿壶

- 女性尿壶
- 设计用于使用轮椅或者卧床的女性

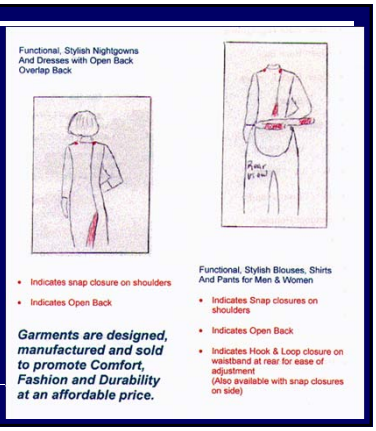
NICE 2006



Freshette

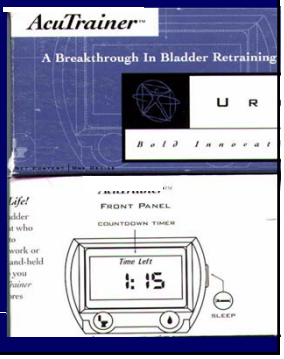
- 可用于远足和野营
- 适用于如厕困难的女性
- 可在床上使用

有助于失禁护理的服装



计时装置

- 有助于如厕活动
- 小的计时器可以从药店购买（用于提醒服用药物）



Questions?

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