

Start	End	Topic	Speakers
09:00	09:15	Managing Bladder Dysfunction Following a Stroke	Jo Booth
09:15	09:30	Pharmacological Management of OAB: Nursing Implications	Alison Bardsley
09:30	09:45	Health Literacy about Incontinence	Donna Bliss
09:45	10:00	Management of Incontinence in Frail Community-Dwelling Elders	Sandra Engberg
10:00	10:15	Management of Post-Prostatectomy Incontinence	Stefano Terzoni
10:15	10:30	Discussion/Questions	All
10:30	11:00	Break	None
11:00	12:00	Lunch	All

Speaker Powerpoint Slides

Please note that where authorised by the speaker all PowerPoint slides presented at the workshop will be made available after the meeting via the ICS website www.ics.org/2017/programme Please do not film or photograph the slides during the workshop as this is distracting for the speakers.

Aims of Workshop

This workshop will focus on the assessment and conservative management of incontinence in specific patient populations including frail, community-dwelling elders, individuals who have had a stroke, and persons with OAB. ICI-6 recommendations relative to these patient populations will be addressed. Incontinence-specific health literacy needs of informal caregivers of individuals with incontinence will be discussed.

Learning Objectives

1. Discuss the assessment and evidence-based management of urinary incontinence in frail, community-dwelling older adults and individuals who have had a stroke.
2. Discuss nursing implications relative to pharmacological therapy in the management of patients with OAB.
3. Discuss recent research findings relative to continence health literacy.
4. Discuss the use of pelvic floor muscle exercise and electric stimulation in the management of post-prostatectomy incontinence.

Learning Outcomes

After this course, participants will be able to:

1. Apply the knowledge gained in care of individuals with incontinence.
2. Address the incontinence-related health literacy needs of informal caregivers of individuals with incontinence.
3. Inform or educate colleagues about the most recent evidence-based approaches to managing incontinence in the patient groups discussed.

Target Audience

Nurses and members of other health care disciplines who collaborate with nurses in research and practice

Advanced/Basic

Basic

Suggested Reading

Booth J, Kumlien S, Zang Y, Gustafsson B, Tolson D. Rehabilitation nurses practices in relation to urinary incontinence following stroke: a cross-cultural comparison. *Journal of Clinical Nursing* 2009; 18 (7), 1049-1058.

French B, Thomas L, Harrison J, Burton C, Forshaw D, Booth J, Britt D, Cheater F, Roe B, Watkins C. Implementing a Systematic Voiding Programme for Patients with Urinary Incontinence After Stroke. *Qualitative Health Research*. *Qual Health Res*, 1049732316630975, first published on March 1, 2016.

Bardsley, A. (2013) Pharmacological management of overactive bladder syndrome. *Independent Nurse*. Pg 19-21.

Robinson, D., and Cardozo, L. (2012) Antimuscarinic drugs to treat overactive bladder *British Medical Journal*.2012.

Mullins J, Bliss DZ, Rolnick S, Henre CA, Jackson J. Barriers to Communication With a Healthcare Provider and Health Literacy About Incontinence Among Informal Caregivers of Individuals With Dementia. *J Wound Ostomy Continence Nurs.* 2016;43(5):539-44. PubMed PMID: 27607750; PubMed Central PMCID: PMC5017302.

Bliss D, Rolnick C, Jackson J, Arntson C, Mullins J, Hepburn K. Health literacy needs related to incontinence and skin damage among family and friend caregivers of individuals with dementia. *J Wound Ostomy Continence Nurs.* 2013;40(5):515-23. PubMed PMID: 24448620; PubMed Central PMCID: PMC3900878.

Engberg, S., Sereika, SM. (2016). Effectiveness of pelvic floor muscle training for urinary incontinence: Comparison within and between nonhomebound and homebound older adults. *Journal of Wound, Ostomy and Continence Nursing*; 43(3): 291-300.

Stenzelius, K., Molander, U., Odeberg, J., Hammarström, M., Franzen, K., Midlöv, P., ... Andersson, G. (2015). The effect of conservative treatment of urinary incontinence among older and frail older people: A systematic review. *Age and Ageing*, 44(5), 736–744.

Lucas G, Bosch RJJ, Burkhard FC, Cruz F, Madden TB, Nambiar AK et al. EAU Guidelines on assessment and nonsurgical management of urinary incontinence. *European Urology* 2012; 62:1130-42. Updated 2016, available as a whole guidelines package from <http://uroweb.org/guideline/urinary-incontinence/>, retrieved February 21, 2017.

Terzoni S, Montanari E, Mora C, Ricci C, Destrebecq A. Developing a rehabilitation programme for male urinary incontinence: detailed schemes and results on 122 patients. *International Journal of Urological Nursing* 2015; 9(3):149-155.

Terzoni S, Montanari E, Mora C, Ricci C, Destrebecq A. Electrical stimulation for post-prostatectomy urinary incontinence: is it possible when patients cannot learn muscular exercises? *International Journal of Urological Nursing* 2015; 9(1):29-35.

Managing Bladder Dysfunction Following a Stroke

Presenter: Jo Booth, Nursing, UK:

Urinary incontinence is common following a stroke with prevalence rates of 32% to 79% on admission to the hospital. While the prevalence decreases following hospital discharge, many patients continue to experience UI. UI is known to have a considerable negative impact on stroke survivors. This presentation will outline types of bladder dysfunction commonly experienced at different points in the trajectory following stroke and the impact on individuals and their families. Nursing management of stroke-related bladder dysfunction will be discussed, with particular focus on the hyperacute/acute and rehabilitation phases and supporting stroke survivors to self-manage ongoing bladder dysfunction.

Pharmacological Management of OAB: Nursing Implications

Presenter: Alison Bardsley, Nursing, UK:

In a review by Irwin et al (2011), an estimated 10.7% of the 2008 worldwide population (4.3billion) were affected by Overactive Bladder (OAB), with this expected to increase to 20.1% (546 million) by 2018. Nurses are often the first contact for patients with OAB and therefore play a pivotal role in assessment, diagnosis and treatment pathways. Behavioural therapies to improve symptoms are recommended as first-line therapy for all patients with OAB. However studies indicate that complete resolution of OAB symptoms with behavioural therapy alone is minimal.

Guidelines recommend second-line therapy with oral antimuscarinic agents for patients whose symptoms are not adequately managed with behavioural modification alone. A combined approach that includes behavioural therapy and pharmacologic intervention is considered the most efficacious option in terms of patient satisfaction, perceived improvement, and reduction in bladder symptoms. Second line pharmacological options from other therapeutic classes—mirabegron, a beta-3 adrenoceptor (beta-3 AR) agonist and botulinum toxin A, a neurotoxin are also approved for the treatment of patients with OAB and nurses need to consider when these may be appropriate for patients who are not responding to oral antimuscarinic therapy. Many nurses will provide advice on, or prescribe medication to manage OAB and provide a role in supporting and educating patients. Since there are a number of pharmacological options now available, it is important that nurses understand the pharmacological action of the different medications and how they can be utilised for individual patients to gain optimum effectiveness.

This session will provide an overview of the role of pharmacology in the management of OAB, taking into account the current international guidelines for prescribing in OAB. The nurse's role in medications management for this group of patients will be discussed.

Health Literacy about Incontinence

Donna Bliss, Nursing, US:

Health literacy is the ability of an individual to obtain and understand information about their health condition or problem and the services they may need in order to communicate with others and make appropriate decisions about care that they desire. General health literacy is low in the population in the US and other countries with certain groups (e.g., elderly, low income, and minority racial and ethnic groups) affected more than others. There are negative consequences to low health literacy for the individual and health care system. The under-reporting of incontinence is well-known and may be influenced by low health literacy.

This session will examine recent research about incontinence health literacy. Although health literacy has traditionally been focused on individual patients, there is growing recognition that health literacy among informal caregivers is vital. Family and friend caregivers of individuals with cognitive deficits who have or may develop incontinence are the exemplar group for this discussion. Incontinence health literacy needs that emerged were in three areas: knowledge, skills in managing, and attitudes. In addition, barriers to communication and information seeking specific to different types of caregivers are revealed.

Management of Incontinence in Frail Community-Dwelling Elders

Sandra Engberg, Nursing, US:

This presentation will examine recent evidence on the assessment and management of UI in frail, community-dwelling older adults. Frailty, age-associated declines in physiologic reserve and function across multiple body systems, and urinary incontinence (UI) are two geriatric syndromes that often co-exist in the geriatric population. Evidence suggests that the presence of either frailty or UI increases the likelihood of the other syndrome with the risk of both syndromes increasing as age increases. Among frail older adults, the etiology of UI is generally multifactorial. These factors include age-related changes in lower urinary tract function as well as a wide variety of factors outside the lower urinary tract such as the effects of medications, comorbid medical and psychiatric illnesses, functional impairments and environmental factors. Given the multifactorial nature of UI in frail elders, assessment must be comprehensive with the goal of identifying all potential contributing factors. Managing UI in the frail elder population should start with the assessment, treatment and re-evaluation of potentially treatable conditions. Lifestyle and behavioral interventions are recommended as the initial treatment for unresolved UI followed by consideration of a trial of pharmacotherapy in appropriately selected patients. The goals of treatment need to consider patients' level of frailty, comorbid conditions, and patient/caregiver goals and expectations. While UI can almost always be improved, complete continence may not be a realistic goal for some frail older individuals.

Management of Post-Prostatectomy UI

Presenter: Stefano Terzoni, Nursing, Italy

Urinary incontinence is a common problem following prostate surgery. This presentation will focus on the management of urinary incontinence in this population. Current evidence about practical aspects of pelvic floor exercises is unclear in the literature. This includes the idea of body position, use of gravity, and how to increase the required muscular effort during the rehabilitation program. These issues will be discussed during this presentation as well as when and how to combine well-known treatments such as functional electrical stimulation and biofeedback with pelvic floor muscle exercises. Practical issues such as which type of stimulation to use, in which phase of the rehabilitation program it should be used and for how many sessions should be included will be discussed. The role of biofeedback and how it should be included as part of the exercise program will also be discussed.

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Learning objectives

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2. Discuss nursing implications relative to pharmacological therapy in the management of patients with OAB.
3. Discuss recent research findings relative to continence health literacy.
4. Discuss the use of pelvic floor muscle exercise and electric stimulation in the management of post-prostatectomy incontinence.

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Topics and Speakers

- Management of Bladder Dysfunction Following a Stroke: Jo Booth
- Pharmacological Management of OAB: Nursing Implications: Alison Bardsley
- Health Literacy about Incontinence: Donna Bliss
- Management of Incontinence in Frail Community-Dwelling Older Adults: Sandie Engberg
- Management of Post-Prostatectomy Incontinence: Stefano Terzoni

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- A shortened version of the handout has been provided on entrance to the hall
- A full handout for all workshops is available via the ICS website.
- Please silence all mobile phones
- Please refrain from taking video and pictures of the speakers and their slides. PDF versions of the slides (where approved) will be made available after the meeting via the ICS website.



Managing bladder dysfunction following a stroke

Gestione delle disfunzioni urinarie post-ictus



Joanne Booth, PhD RN
Professor of Rehabilitation Nursing
School of Health & Life Sciences

Joanne Booth

Affiliations to disclose*:

None

Funding for speaker to attend:

- Self-funded
 Institution (non-industry) funded
 Sponsored by:



Content

- Summary of stroke and effects on person
 - Punti chiave dell'ictus e suoi effetti
- Types of lower urinary tract dysfunction (LUTD)
 - Tipologie di disfunzioni del basso tratto urinario
- ICI 2017 management options for LUTD following stroke
 - Gestione dei LUTD post-ictus secondo ICI 2017



Stroke in UK (1)

- More than 150,000 strokes each year
- 85% ischaemic, 15% haemorrhagic
- 1.2 million stroke survivors
- Stroke is the fourth leading cause of death in UK, second most common across Europe

Ictus nel Regno Unito:

- Oltre 150.000 casi/anno
- 85% ischemici, 15% emorragici
- 1.2 milioni di sopravvissuti
- Quarta causa di morte in UK, seconda in Europa



Stroke in UK (2)

- Stroke causes 7% deaths in men, 10% deaths in women in UK; across Europe 10% deaths in men, 15% deaths in women
- Stroke is leading cause of disability in UK - two thirds of stroke survivors leave hospital with a disability

Ictus nel Regno Unito (2):

- 7% mortalità negli uomini, 10% nelle donne in UK
- 10% negli uomini, 15% nelle donne in Europa
- Prima causa di disabilità in UK, 2/3 dei sopravvissuti sono dimessi con almeno una disabilità



Effects of stroke

- Sensory-motor **sensitivi/motori** 80%
- Communication **comunicazione** 33%
- Cognition **capacità cognitive** 24-39%
- Vision **capacità visive** up to 65%
- Swallowing **deglutizione** 40%
- Emotional/psychological **Sfera emotiva** 20-29%
- Pain **Dolore** 20%
- Social **Sfera sociale**



Stroke Association 2013

Impact of stroke on the bladder (1)

- Little good quality research investigating LUTD after stroke
- Very limited understanding of pathophysiology, natural history, types of bladder and bowel dysfunction

Impatto dell'ictus sulla vescica

- Poche evidenze di qualità sui LUTD post-ictus
- Limitatissima comprensione della fisiopatologia, della storia naturale e delle disfunzioni vescicali e intestinali



Impact of stroke on the bladder (2)

- Minimal evidence of effective intervention: focus is on containment more than supporting recovery and treatment
- Consensus on current evidence – International Consultation on Incontinence (ICI) 2017

Impatto dell'ictus sulla vescica

- Le evidenze riguardanti trattamenti realmente efficaci sono minime
- Il focus è la riduzione dei sintomi più che sul trattamento e sulla riabilitazione
- Esiste un consensus sulle attuali evidenze: ICS 2017



Urinary incontinence after stroke

Incontinenza urinaria post-ictus

- Affects 40-60% of people following a stroke: in UK 60,000 – 90,000 people each year
- Colpisce 40-60% dei pazienti post-ictus: 60-90.000 persone in UK ogni anno
- 44% report UI at 3 months, 38% at 12 months
- 44% riferisce incontinenza a 3 mesi, 38% a 12 mesi
- Physical, psychological and social impact
- **Impatto fisico, psicologico, sociale**
- Associated with complications
- **L'incontinenza è associata a complicanze**



Bornie MJ et al. *Age and Ageing*. 1986; 15:177-81.
Williams MP, et al. *Age and Ageing* 2012; 41:371-376

LUTD post stroke

	Sakakibara (1996)	Williams (2012)	Brittain (2000)
LUTD	53%	84%	64%
Nocturia	36%	79%	49%
Urgency UI	29%	37%	33%
Frequency		18%	15%
Difficulty voiding	25%		
Retention	6%		3.5%

Sakakibara et al 1996, *J Neurol Sci* 137(1):47-56
Brittain et al 2000 *Stroke* 31 (4):886-91
Williams 2012 *Age Ageing* 41(3):371-6



Types of lower urinary tract dysfunction after stroke – ICI, 2017

- Neurogenic UI (OAB wet)
- Functional UI– cognitive, communicative, motor impairments and environmental challenges
- Mixed
- **Incidence of LUTD in stroke patients ranges from 14-53% principally due to OAB and is higher when the frontal cortex is involved (LOE 3)**

ICI, 2017: Chap 10 P. 1196- 1200

Disfunzioni del basso tratto urinario dopo ictus, ICI 2017:

- Incontinenza neurogena (vescica iperattiva bagnata)
- Incontinenza funzionale da disturbi cognitivi, comunicativi, motori e cambiamenti nell'ambiente circostante il paziente
- Mista
- **Incidenza 14-53%, principalmente OAB. L'incidenza aumenta se la corteccia frontale è coinvolta.**

ICI 2017 summary of stroke specific evidence

Riassunto delle evidenze ICI 2017

- OAB (wet or dry) most common LUTD after stroke
- **OAB asciutta o bagnata è il più comune LUTD post ictus**
- Infarction – increased detrusor overactivity likely
- **Nell'ischemia è probabile aumento iperattività detrusoriale**
- Haemorrhage – detrusor underactivity more likely
- **Nell'emorragia è probabile una ipoattività detrusoriale**



ICI 2017 summary of stroke specific evidence (2)

- Localisation
 - frontal lobe associated with OAB
 - brainstem infarcts/ haemorrhage may be associated with more voiding difficulties
- No evidence for laterality

Localizzazione

- Lobo frontale: associato ad OAB
- Ischemie/emorragie possono essere associate a LUTS di svuotamento
- Nessuna evidenza per la lateralità



Impact of urinary incontinence after stroke (1)

- More significant for stroke survivors than for those without stroke.
- More severe stroke increases risk of UI
- Increased mortality and disability
- Increased institutionalisation, in first year

Burney TL, et al. Effects of cerebrovascular accident on micturition. Urol Clin North Am 1996;23:483-90
 Patel, et al. Natural History and Effects on 2-Year Outcomes of Urinary Incontinence After Stroke. Stroke. 2001;32:1222-1227.
 Edwards DF. Post stroke urinary loss, incontinence and life satisfaction. Neurorol Urodyn. 2006; 25(1):39-45.



Impact of urinary incontinence after stroke (2)

- Decreased discharge home
- Depression – 4 times more likely following stroke
- Poorer quality of Life
- Reduced participation, impoverished social life and relationships

Conseguenze dell'incontinenza post ictus

Dimissione tardiva, depressione, scarsa qualità di vita, impatto sociale



Impact of urinary incontinence after stroke (3)

Associated complications:

- Urinary tract infection
- Dehydration
- Skin breakdown
- Sleep disturbance
- Pain/physical discomfort

Complicanze: infezioni urinarie, disidratazione, lesioni cutanee, disturbi del sonno, dolore/discomfort fisico



Human costs of UI and FI

- Isolation
- Dependence
- Embarrassment
- Discomfort
- Fear
- Frustration

Effects on stroke survivor and carers

Costi umani: Isolamento, dipendenza, imbarazzo, discomfort, paura, frustrazione. Impatto su pazienti e caregiver.



Nurses rehabilitation priorities

High

- Mobility
- Swallowing
- Speech
- Psychological support
- Bladder and bowel rehabilitation



Low

Priorità per l'infermiere: mobilità, deglutizione, comunicazione verbale, supporto psicologico, riabilitazione urinaria e intestinale.

Rehabilitation and care mismatch

- Management of bladder and bowel dysfunction are **priorities** for **patients** and their **carers**
- Not seen as a priority by health care professionals:
 - poor **assessment** and case finding
 - poor treatment and **care planning**
 - poor implementation of **treatment** and care plans
 - poor bladder and bowel **rehabilitation** in evidence

Booth et al 2009. Rehabilitation nurses practices in relation to urinary incontinence following stroke. *Journal of Clinical Nursing*, 18, 1049–1058
 White et al . The experience of urinary incontinence in stroke survivors. *Canadian Journal of Occupational Therapy* 2014, 81, 2: 124-134

Vescica e intestino sono prioritari per pazienti e caregiver, ma non sempre lo sono per i sanitari -> scarsa considerazione.

Bladder management post stroke (1)

- ICI, 2017 - Management will depend on the type of LUTD – neurogenic or functional or combination [LOE 3]
- Treatment regimens should be individualised.

Gestione: dipende dal tipo di LUTD, la riabilitazione deve essere personalizzata.

Bladder management post stroke (2)

- Hyperacute interventions
- Lifestyle changes
- Behavioural therapies
- Pharmacological
- Environmental management
- Electrical stimulation



Hyperacute phase

- Urinary retention common – 37% (Cowey 2011)
- Support spontaneous recovery
 - Early mobilisation
 - Regular attempts to use toilet
 - Monitor fluid balance
- Intermittent catheterisation
- Full continence assessment



Lifestyle changes

Neurogenic and functional LUTD

- Fluid management – Type, amount, timing
- Bowels – avoid constipation
- Exercise
- Medication

Stile di vita: gestione liquidi, evitare costipazione, esercizio fisico, farmaci.



Behavioural therapies

Functional LUTD

- Education & self-monitoring
- Voiding programmes eg prompted voiding, timed voiding with physical assistance
- Bladder training
- Pelvic floor muscle training



Pharmacological

- **Bladder focused (neurogenic)**
 - Anticholinergics / antimuscarinics – those that do not cross blood-brain barrier easily
 - Beta 3 adrenergic agonist (Mirabegron)
- **Disease focused (functional)**
 - Anticoagulants for atrial fibrillation
 - Diuretics for hypertension

Gestione farmacologica: centrata sulla vesica o centrata sulla patologia.



Environment

Functional and neurogenic LUTD

- Access to toilet
- Provision of assistance
- Equipment and toileting aids
- Comfort and cleanliness of toilet/toilet aid

Ambiente: accesso ai servizi igienici, assistenza, ausili, comfort e pulizia



Electrical stimulation

Neurogenic LUTD – OAB and incomplete emptying

- Electro-acupuncture
- Transcutaneous tibial nerve stimulation
 - Monteiro 2014
 - Booth 2016

Stimolazione elettrica: elettro-ago-puntura, stimolazione nervo tibiale



What is current situation for majority of stroke survivors?



Management of *In*continence

- Containment - for social continence, not recovery of bladder function and continence promotion
 - Absorbent products
 - Penile sheaths
 - Indwelling urethral catheters
 - Supra-pubic catheters

Gestione incontinenza: "contenimento" con assorbenti, clamp, cateteri



Conclusion (1)

- Limited understanding of LUTD following stroke
- ICI 2017 recommends dividing UI in stroke into two types – neurogenic UI (OAB wet) and functional UI (immobility and loss of initiative/cognition)
- Neurogenic needs anticholinergic drugs that do not penetrate blood brain barrier
- Functional UI needs behavioural therapy

Limitata comprensione dei LUTD dopo stroke; l'ICI raccomanda suddivisione in OAB bagnata e incontinenza funzionale. La prima richiede anticolinergici, la seconda terapia comportamentale.

Conclusions (2)

- Functional UI needs behavioural therapy
- More stroke specific research needed
- Evidence on effective treatments essential

L'incontinenza funzionale richiede terapia comportamentale. Serve più ricerca con evidenze solide sui trattamenti efficaci.

University

Thank you



Brighter futures begin with GCU

Jo.booth@gcu.ac.uk



Pharmacological Management of OAB: Nursing Implications



Alison Bardsley
RGN, DipDN, MSc, PgCert He
Senior Lecturer
Course Director for Non-medical prescribing
Coventry University



Alison Bardsley

Affiliations to disclose*:

None to Declare

Funding for speaker to attend:

Coventry University - Employer

- Self-funded
- Institution (non-industry) funded
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Overactive bladder

- A problem with bladder storage function that causes a sudden urge to urinate.
- The urge may be difficult to suppress, and overactive bladder can lead to the involuntary loss of urine (incontinence).

Vescica iperattiva: problema di riempimento che causa urgenza e può portare ad incontinenza.



Oral Medication options

- Antimuscarinic/Anticholinergic drugs first choice
- BETA₃ Adrenoceptor Agonists
- Botulinum Toxin A

Farmaci orali: antimuscarinici/anticolinergici come prima scelta, agonisti beta3, tossina botulinica A



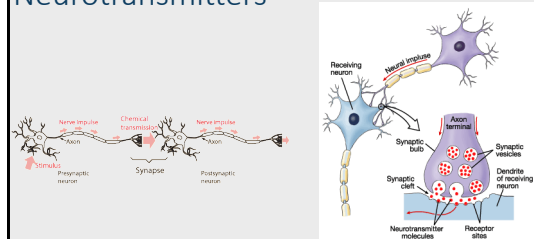
Mode of action

- Acetylcholine main neurotransmitter in bladder
- Drugs are competitive antagonists within smooth muscle
- Inhibiting micturition
- Some are M₃ selective
- Others are non-selective

Azione: l'acetilcolina è il principale neurotrasmettitore in vescica. I farmaci sono antagonisti competitivi all'interno della muscolatura liscia.
Inibizione stimolo minzione; alcuni sono M3 selettivi, altri no.

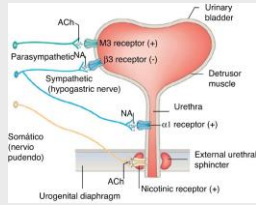


Neurotransmitters



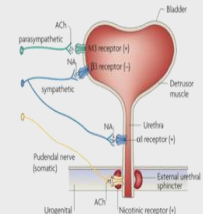
Role of Neurotransmitters in the Bladder

- Main neurotransmitter in storage phase - norepinephrine
- Activates adrenergic receptors in bladder muscle and internal sphincter (β_3 and α_1) – relax the bladder and close the internal sphincter



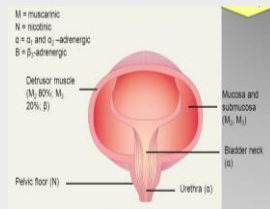
Role of Neurotransmitters in the Bladder

- Main neurotransmitter in voiding phase - acetylcholine
- Muscarinic receptor function mediated by acetylcholine – controls contraction of detrusor muscle and relaxation of internal sphincter muscle
- Purinergic receptors (P2X₃) are mediated by adenosine triphosphate (ATP) and sense bladder fullness for voiding

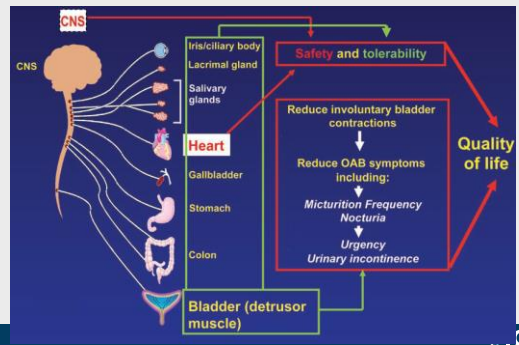


Muscarinic receptors

- Muscarinic receptors – subtypes M₂ and M₃ predominant
- M₃ important for normal bladder contractions
- M₂ may play more prominent role in certain disease states
- Binding of acetylcholine to M₃ on detrusor activates signalling → bladder contraction and voiding



Side effects



BETA₃ Adrenoceptor Agonists

- Mirabegron (Betmiga- MR) - potent and selective beta 3-adrenoceptor agonist → relaxation of bladder smooth muscle
- Side effects: GI disorders, ↑ Blood pressure
- Mirabegron should be offered if ‘antimuscarinics’ do not work, if they are not suitable, or their side effects are unacceptable
- Combination therapy an option for anticholinergic-resistant neurogenic bladder

Mirabegron: offrire quando gli anticolinergici non funzionano. Rilassa la muscolatura liscia. Terapia combinata è un'opzione per la vescica neurologica resistente agli anticolinergici.

Alternatives??

- **Atropine** – not used due to side effects
- **Flavoxate** - scarce clinical evidence of effectiveness
- **Propantheline** –non-selective –effects not well documented
- **Imipramine** – antidepressant with anticholinergic side effects – not recommended due to side effects (especially cardiac)
- **Intravesical Vanilloids** -Capsaicin and Resiniferatoxin
- **Baclofen**

How do you choose?

- Take into account pre-existing conditions and concomitant medications especially the use of other anticholinergic medications
- Risk of adverse effects and common side effects
- Treatment should be individualised
- Also consider
 - The likelihood of success
 - Frequency and route of administration
 - Some adverse effects may indicate treatment is starting to have an effect
 - May not see full benefit for 4 weeks

Come scegliere? Considera terapie e problemi pre esistenti, le probabilità di successo e il fatto che i risultati possano non giungere prima di 4 settimane.

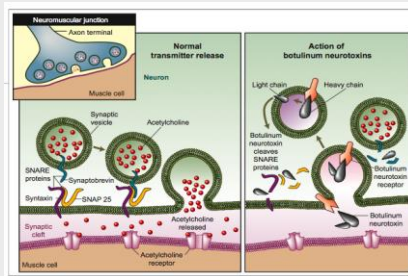
Nursing considerations

- Importance of patient information
- Review after 4 weeks – consider increasing dose or alternatives if ineffective or side effects not tolerated
- Patient concordance
- How long to continue treatment
- Relapse rates
- Consider combination therapies

Considerazioni infermieristiche: informazione al paziente, valutare dopo 4 settimane, aderenza del paziente, durata del trattamento, recidive, possibili terapie combinate.



Botulinum Toxin A



Nursing Considerations

- Consider whether patient is able/willing to undertake Intermittent self-catheterisation (ISC)
- Can take a few days following injection to see symptom improvement
- Significant improvements in QOL for Multiple Sclerosis patients and those already doing ISC
- Increased risk of UTI
- Requires re-injection

Considera se il paziente può/vuole iniziare il cateterismo. Possono volerci diverse iniezioni per vedere i primi risultati. Richiede trattamento periodico. Aumenta rischio infezioni.



Summary

- Individualised treatment/management plan is essential
- Patient assessment needs to be holistic
- The provision of Patient information is important to concordance
- Patients must be reviewed after 4 weeks when starting oral medication

In sintesi: il trattamento personalizzato è essenziale. L'accertamento deve essere olistico. L'informazione al paziente è importante per la compliance. Dopo 4 settimane bisogna rivalutare i risultati.




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Incontinence Health Literacy

Donna Z. Bliss, PhD, RN, FAAN, FGSA
Professor, University of Minnesota School of Nursing
Minneapolis, MN

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Driven to Discover™


Donna Bliss

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Health Literacy

US (NIH and IOM):

- Access and navigate health information and healthcare system and seek care
- Ability to communicate with a healthcare provider
- Understand info and make choices
- Manage chronic health conditions
- Engage in symptom self-management

(NIH, 2012 <http://www.nih.gov/clearcommunication/healthliteracy.htm>; Institute of Medicine, 2004) <https://www.nap.edu/read/10883/chapter/4>)

Europe (WHO):

- Health care + disease prevention + health promotion

(Kickbusch, I et al. Health Literacy The Solid facts, WHO, 2013)

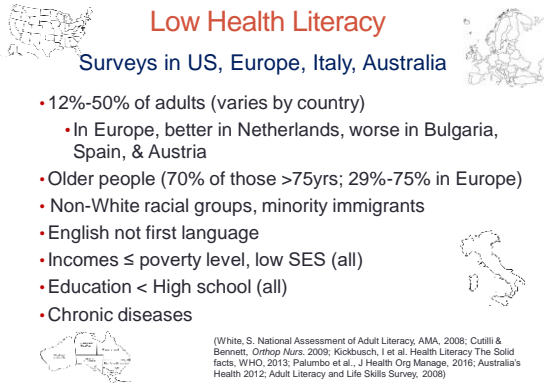
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Low Health Literacy

Surveys in US, Europe, Italy, Australia

- 12%-50% of adults (varies by country)
 - In Europe, better in Netherlands, worse in Bulgaria, Spain, & Austria
- Older people (70% of those >75yrs; 29%-75% in Europe)
- Non-White racial groups, minority immigrants
- English not first language
- Incomes ≤ poverty level, low SES (all)
- Education < High school (all)
- Chronic diseases

(White, S. National Assessment of Adult Literacy, AMA, 2008; Cutilli & Bennett, Orthop Nurs. 2009; Kickbusch, I et al. Health Literacy The Solid facts, WHO, 2013; Palumbo et al., J Health Org Manage. 2016; Australia's Health 2012; Adult Literacy and Life Skills Survey, 2008)



Low Health Literacy Effects

- Report worse health status
- Increase rates of non-communicable diseases
 - cancer, diabetes, heart, and respiratory disease
- Stigma
- Less communication with providers
- More hospitalizations
- Increased healthcare costs
 - Cost of limited health literacy to US economy = \$106 - \$236 billion USD annually (2010)

(White, S. National Assessment of Adult Literacy, AMA, 2008; Cutilli & Bennett, Orthop Nurs. 2009; Kickbusch, I et al. Health Literacy The Solid facts, WHO, 2013; Australia's Health 2012; Adult Literacy and Life Skills Survey, 2008)

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Low Incontinence Literacy

- Women with pelvic floor (PF) disorders (UI and/or POP) → **low recall of PF diagnosis and treatment plan**
 - **poor understanding** of their PF condition, despite high general health literacy scores
 - POP < UI
 - 36 women, 42-94 years, 61% White, >90% high school
 - Interview & checklist about diagnosis and treatment plan at clinic, taped
 - Took Test of Functional Health Literacy in Adults

(Anger et al., Female Pelvic Med Reconstruct Surg, 2012)

Low Incontinence Literacy

- Adults with **fecal incontinence lack terms** to describe their problem to clinicians (Patel et al., *JWOCN*, 2010)
- Use terms for other GI problems –confound dx
 - (e.g., diarrhea, colitis, IBS)
- UI terms confusing (OAB vs UI?)
(Chelvanayagam & Norton, *Nurs Times*, 2000; Patel et al. *JWOCN*, 2010)
- < 25% church group reported their UI, FI or DI to a clinician
 - n=145, M & F, aged 21-80+
- 1/3 desired more info about incontinence and its treatment (Haasan, C. *JWOCN Abstract*, 2016)

Caregiver Health Literacy Needs

- Caregiving is self-affirming yet stressful (AIHW 2011; Lieberman, 1995; Almberg et al., *J Adv Nurs*, 1997; Mittelman, et al., 2006)
- Caregivers of cancer patients
 - Difficulty learning clinical information
 - Unable to interpret details
 - Receive too little or too much information
 - Dissatisfied with the communication & abrupt manner of clinicians (Bevan et al., *Patient Education Counseling* 2008)
- UI and FI occur in Alzheimer's disease (AD) -- Family caregivers feel unprepared to manage – in different conditions

(McCallum et al., *Australian J Aging*, 2005)
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Assessing Incontinence Literacy Needs of Carers of Individuals with AD

- 15 million carers in US; 1 million in Australia (<http://www.alz.org/facts/>; <http://www.alz.org/au/dementia-alzheimers-australia.aspx#caregiving>)
- >1 million Italians are living with dementia. By 2020, 584,000 new cases of dementia are estimated for the country (<http://www.alz.org/it/dementia-alzheimers-italy.aspx>)
- Our study -- Informal caregivers who assist or will assist family member or friend with incontinence
 - 7 community care sites



Informal Caregiver Sample

- n = 48
- Sex: 75% female
- Age = 64 (14) yrs (mean (sd))
- Race/Ethnicity
 - 52% White, not Hispanic
 - 48% minority
 - 10 % Black
 - 6% > 1 race
 - 31% Hispanic
- Types of Caregivers
 - 43% spouses
 - 31% children (daughters)
 - 14% other relative
 - 10% friends
- Education
 - 71% ≥ high school

(Bliss et al, *JWOCN*, 2013)
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Care Recipient Characteristics

- Sex: 62% female
- Age: 80 (9) yrs (mean (sd))
- Current Incontinence
 - 58% incontinent
 - 33% UI only
 - 25% UI+FI

 (Bliss et al, *JWOCN*, 2013)
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Incontinence Literacy needs Knowledge



- Why does incontinence occur in AD? during sleep?
- Common "adult" terms for incontinence and skin damage
- Management options other than pads
 - Medications, diet, fluids, surgery, behavioral
- Guide to absorbent and skin care products
- Skin damage descriptions
- Questions to ask a nursing home

(Bliss et al, *JWOCN*, 2013)
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Incontinence Literacy Skills

- “How to” -- Manage undressing/dressing, modesty issues, skin care
- Going out into public – avoid “accidents”
- Reduce physical burden, encourage cooperation of care recipient



(Bliss et al, JWOCN, 2013)

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Incontinence Literacy Attitudes

- Health vs. behavior problem
- Discuss without embarrassment
 - Clinician initiate questions
- Be prepared
- Clinician advice is trusted/valued
- Mixed opinions: talk to MD in presence of care recipient or not
- Share experiences and problem-solving with other caregivers
- Take care of self

(Bliss et al, JWOCN, 2013)

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Raise Incontinence Literacy Promote Continence



<http://www.continence.org.au/pages/world-continence-week.html>



Resources for Carers

Free National
Continence Helpline
(1800 33 00 66)
Speak with a nurse
continence advisor



School program

More Examples



Adelaide, South Australia, Australia

Find, Plan a Trip, My Toilets

<https://toiletmap.gov.au/>



http://www.citymetric.com/sites/default/files/styles/nodemage/public/article_2014/12/popup_toilet.jpg?tok=By3ofQwv

Public maps and
mobile apps for toilet
location



Studies of Interventions

- **Tät mobile app** for self-management of **stress UI** improved ICIQ-UI and LUTs scores of 62 Swedish women vs 62 with delayed RX (Askland et al., NAU 2016)
- A **continence education brochure** prompted individuals to take self-care actions (O'Connell, JWOCN 2000)
- Self-management/literacy **UI intervention** improved ICIQ-UI scores, knowledge, attitudes
 - 17 community Korean women
 - Intervention = UI knowledge, attitudes, myths, lifestyle factors, behavioral Rx's, communication in five 90 min group sessions (De Gagne J Int Nurs Sci, 2015)

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Studies of Interventions

- **Educational and supportive materials** about fecal incontinence for AD patients and caregivers
 - available via bliss@umn.edu or ICS Nursing Committee webpage
- **Training caregivers** of homebound elderly with AD in **prompted voiding** reduced UI episodes of care recipients 22% (Engberg, JWOCN 2002)
- **Caregivers** of frail elderly **trained** to perform a **toileting** intervention reduced frequency and volume of UI and perineal dermatitis in 19% of care recipients (Colling, Urol Nurs 2003)

(Bliss et al, JWOCN, 2013)

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Summary

- Incontinence literacy is low
 - Patients and carers need/desire more info
- **Nurse continence specialists** have an important role in raising incontinence literacy
 - Provide care resources, increase communication, and educate on management
- **Mobile resources** – new tools
 - Hard copy and face to face consultation may benefit others/elderly

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Management of UI in Frail Community Dwelling Older Adults

La gestione dell'incontinenza urinaria negli anziani fragili a domicilio

Sandra Engberg, PhD, RN, CRNP, FAAN



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Frailty – Fragilità

- A decline in physiologic reserve and function across multiple organ systems¹
- Una riduzione delle riserve fisiologiche e delle funzioni nei sistemi organici¹
- Increased vulnerability to stressors results in increased risks for disability, nursing home admission, hospitalization and mortality²
- L'aumento di vulnerabilità a 'stressors' aumenta il rischio di disabilità, ammissione nella casa di riposo, ospedalizzazione e mortalità²



Frailty – Fragilità

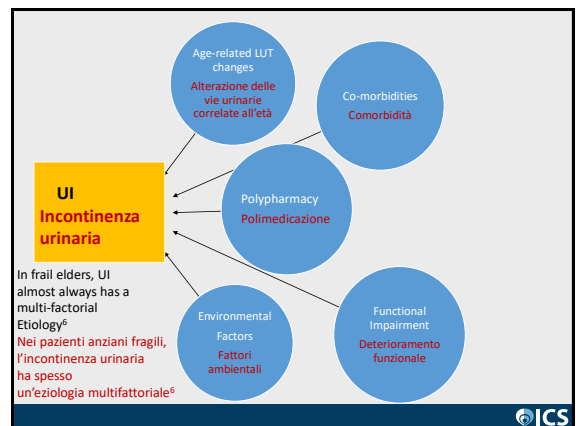
- As the population worldwide ages, the proportion of frail individuals is increasing
 - Estimated prevalence of 30% in those ≥ 85 years³
- La popolazione mondiale invecchia e la proporzione degli individui fragili aumenta:
 - Prevalenza stimata al 30% nelle persone ≥ 85 anni³



UI and Frailty –

Incontinenza urinaria e fragilità

- Geriatric syndromes that often co-exist
 - The presence of each increases the risk of the other^{4,5}
 - In one study, UI was associated with a 6.5 greater risk of frailty (controlling age and sex)⁴
- Sono sindromi geriatriche che spesso coesistono
 - La presenza di una aumenta il rischio dell'altro^{4,5}
 - In uno studio, l'incontinenza urinaria è stata associata ad un aumento del 6.5 del rischio per fragilità (controllato per età e sesso)⁴



Assessment - Assessment

- Goal: identify potentially contributing factors
- Obiettivo: identificare possibili fattori contribuenti
- Screen for frailty⁶
- Screening della fragilità⁶
- Comprehensive assessment to identify co-morbid conditions, functional impairments and medication that increase the risk for UI
- Assessment multidimensionale per identificare possibili condizioni di comorbidità, un deterioramento funzionale e farmaci che aumentano il rischio di incontinenza urinaria



Assessment - Assessment

- Targeted UI history and focused physical examination
- Anamnesi mirata sull'incontinenza urinaria e esame fisico
- Patient/caregiver preferences in relation to treatment and outcome expectations
- Preferenze del paziente/dei caregiver in relazione alle aspettative di trattamento e outcome
- Other diagnostic tests as indicated
- Altri test diagnostici se indicati



Management - Gestione

- Treatment goals need to: consider level of frailty, co-morbid conditions and impairments and patient/caregiver preferences and outcome expectations
- Gli obiettivi di trattamento devono: considerare il livello di fragilità, le condizioni di comorbidità e deterioramento, le preferenze del paziente/dei caregiver e le aspettative sugli outcome
- Complete continence may not be a realistic goal for those who are very frail⁶
- La continenza completa potrebbe essere un obiettivo non realistico per i pazienti in uno stato di fragilità avanzato



Management - Gestione

- Begin with assessment, treatment, and re-evaluation of potentially treatable conditions
- Iniziare con l'assessment, trattamento e ri-valutazione delle condizioni trattabili
- Lifestyle interventions, e.g., fluid management, and smoking cessation, physical activity & prevention of constipation
- Interventi sullo stile di vita, per es.: gestione dei fluidi, cessazione del fumo, attività fisica e prevenzione della stipsi



Management - Gestione

- Lifestyle interventions
 - Some have been examined in clinical trials of non-frail adults with varying support for their effectiveness
 - Lack of research examining effects in frail elders⁶
- Interventi sullo stile di vita
 - Alcuni interventi sono stati indagati in studi clinici su adulti non-fragili con risultati variabili sull'efficacia
 - Mancanza di ricerca sugli effetti negli anziani fragili⁶



Management - Gestione

- Absorbent pads
 - May have a role when complete continence is not an achievable goal
 - Often overused
 - Research suggests they are the most frequent UI management approach in frail elders across all settings⁷
 - Can increase the risk for incontinence, UTIs and skin irritation
 - Should not be a substitute for active treatment of UI⁸
- Assorbenti
 - Possono essere utili in caso la continenza completa non è un obiettivo raggiungibile
 - Spesso sovrautilizzati
 - La ricerca indica che presentano l'approccio più frequente nella gestione dell'incontinenza urinaria per anziani fragili nei vari settings⁷
 - Possono aumentare il rischio di incontinenza, infezioni delle vie urinarie e irritazione della cute
 - Non devono sostituire il trattamento attivo dell'incontinenza urinaria⁸



Management - Gestione

- Environmental interventions
 - Lack of access to toilets and timely toileting assistance are well known risk factors for UI
 - For frail elders unable to toilet independently, the availability of timely toileting assistance is critical to the success of all other interventions for UI
- **Interventi ambientali**
 - Mancanza di accesso al bagno e assistenza precoce per andare in bagno sono fattori di rischio per l'incontinenza urinaria
 - Per anziani fragili che non sono autonomi a recarsi in bagno, l'assistenza precoce è un fattore cruciale per il successo degli altri interventi sull'incontinenza urinaria



Management - Gestione

- Behavioral interventions
 - Lack of side effects make behavioral interventions ideal first-line treatment options
 - Cognitive and functional status guides the best approach
- **Interventi comportamentali**
 - l'opzione primaria e ideale per il trattamento per l'assenza di effetti indesiderati
 - lo stato cognitivo e funzionale guida l'approccio migliore



Management - Gestione

- Voiding programs
 - When cognitive and/or physical impairments that limit ability to actively participate in self-care
 - Require active caregiver participation
- Prompted voiding: combines regular prompts to void with positive feedback for appropriate toileting
- **Programmi di voiding/svuotamento**
 - Se la partecipazione attiva e il 'self-care' sono limitati a causa del deterioramento cognitivo e/o funzionale
 - Richiede la partecipazione attiva da parte del caregiver
- **Prompted voiding- Svuotamento guidato** : combinazione tra tentativi regolari con un rinforzo positivo quando lo svuotamento è stato appropriato



Management - Gestione

- Prompted Voiding
 - 3-day trial is recommended to identify those most likely to benefit
 - At least a 20% reduction in wet checks, appropriate toileting rate of at least 66% and requires assistance of no more than one caregiver to toilet⁵
- **Prompted Voiding - svuotamento guidato**
 - 3 giorni di sperimentazione sono raccomandati per identificare gli anziani che possano trarne beneficio
 - Una riduzione di almeno il 20% di perdita delle urine, un tasso di toileting appropriato di almeno il 66% e per andare in bagno non necessita più di un caregiver⁵



Management - Gestione

- Habit training (matching toileting schedule to voiding pattern) and scheduled toileting (regular toileting without prompts)
 - Insufficient evidence to determine effectiveness⁶
- **Il Habit training (adattare il piano di toileting al ritmo e al modello minzionale) e la toileting programmata (toileting regolare senza guida da parte del caregiver)**
 - Evidenza sull'efficacia non sufficiente⁶



Management - Gestione

- Those able to actively participate in treatment may be candidates for pelvic floor muscle training (PFMT) and/or bladder training (BT)
 - Limited research examining effects of these intervention
- **Anziani che possono partecipare attivamente ai trattamenti sono candidati per la ginnastica pelvica ('pelvic floor muscle training') e/o addestramento vescicale ('bladder training')**



Management - Gestione

- Systematic review with 3 studies examining the effect of a multicomponent behavioral intervention (with PFMT and BT): significant reductions in UI at the end of the interventions⁹
- Revisione sistematica di 3 studi esaminando gli effetti di un intervento multicomponente comportamentale (con ginnastica pelvica e addestramento vescicale): riduzione significativo dell'incontinenza urinaria alle fine dell'intervento⁹



Management - Gestione

- Study comparing PFMT in frail (homebound) and non-frail older adults: significant reductions in UI in both groups (frail: 64.5%; non-frail: 70.4%); no significant group differences¹⁰
 - Most frail elders will need ongoing support to sustain improved continence levels
- Uno studio ha comparato la ginnastica pelvica tra anziani fragili (a domicilio) e anziani non-fragili: riduzione significativa dell'incontinenza urinaria in tutti e due i gruppi (fragili: 64.5%; non-fragili: 70.4%); nessun differenza tra i gruppi¹⁰
 - La maggior parte degli anziani fragili ha bisogno di un supporto continuo per sostenere il miglioramento della continenza urinaria



Management - Gestione

- Pharmacologic treatment
 - Increased risk for adverse effects in frail elders
 - Only consider after potentially remedial comorbid conditions/factors are addressed and there is an appropriate trial of behavioral therapy and lifestyle interventions⁶
- **Trattamento farmacologico**
 - Rischio elevato per effetti indesiderati negli anziani fragili
 - Da considerare solo dopo possibili condizioni/fattori di comorbidità sono stati indirizzati e dopo una fase di prova sufficiente di interventi comportamentali e interventi sullo stile di vita⁶



Management - Gestione

- Pharmacologic treatment
 - Generally, should not be used if unable/unwilling to toilet
- **Trattamento farmacologico**
 - In generale, non da considerare se l'anziano non è in grado/cooperante ad andare in bagno



Conclusions - Conclusioni

- The prevalence of both frailty and UI increase with age and the two conditions often co-exist
- La prevalenza della fragilità e dell'incontinenza urinaria aumenta con l'età e spesso queste due condizioni coesistono
- The etiology of UI is generally multifactorial with contributing factors extending beyond the lower urinary tract
- L'eziologia dell'incontinenza urinaria è multifattoriale con fattori contribuenti il basso tratto urinario



Conclusions - Conclusioni

- Assessment and treatment must take the many potential contributing factors into consideration
- L'assessment e il trattamento devono prendere in considerazione i vari possibili fattori contribuenti
- Goals of treatment need to consider the individual's level of frailty, co-morbid conditions, and patient/caregiver preferences and expectations
- Gli obiettivi del trattamento devono considerare il livello di fragilità e le condizioni di comorbidità dell'individuo e le preferenze e aspettative del paziente e il suo caregiver



Conclusions - Conclusioni

- Treatment should start with the assessment, treatment and re-evaluation of potentially treatable conditions
- **Il trattamento inizia con l'assessment, il trattamento e la rivalutazione delle possibili condizioni trattabili**
- If UI is unresolved, treatment should focus on lifestyle and behavioral interventions
- **Se l'incontinenza urinaria non viene risolta, il trattamento deve focalizzarsi sullo stile di vita e sugli interventi comportamentali**



Conclusions - Conclusioni

- If UI continues, a trial of pharmacotherapy can be considered in appropriately selected patients
- **Se l'incontinenza urinaria persiste, si può prendere in considerazione un trattamento farmacologico nei pazienti appropriatamente selezionati**
- UI can almost always be improved in frail elders but complete continence may not be a realistic goal depending on the level of frailty
- **L'incontinenza urinaria può quasi sempre essere migliorata negli anziani fragili, però dipende dal livello di fragilità. La continenza completa non è un obiettivo realistico**



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Management of post-prostatectomy incontinence

Stefano Terzoni, PhD, RN
 San Paolo teaching hospital, Milan
 Chair EAUN – European Association of Urology Nurses



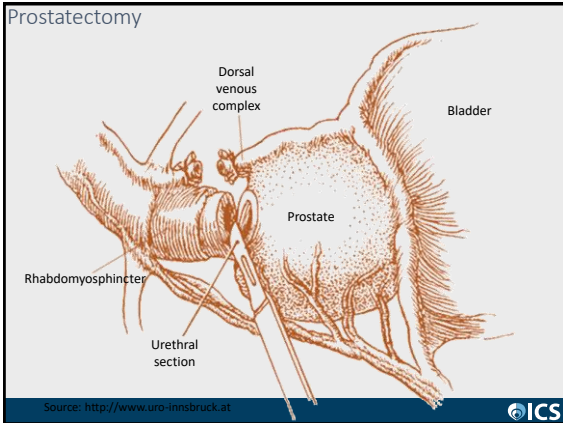
Stefano Terzoni

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Post-prostatectomy urinary incontinence

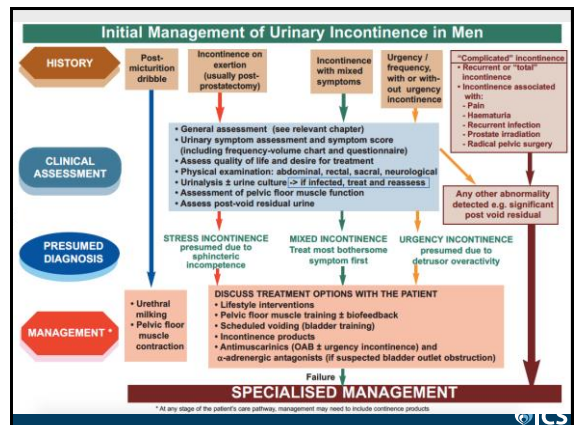
- Prevalence 2%-60%: surgical technique, follow-up times, definition of incontinence chosen by the authors (Anderson A et al. Cochrane Datab Syst Rev 2015; 1)
- Predictors of UI after surgery; age, ECOG score, nerve-sparing technique, surgeon's experience, diabetes, obesity (Hattiboglu et al. World J Urol 34(1):113-20 (2016))
- No difference in UI incidence after robotic vs open prostatectomy (Haglund et al. Eur Urol 68(2):216-25 (2015))
- Intraoperative damage of the rhabdomyosphincter (Peterson e Chen, NeuroUrol Urodyn 31:60-63 (2012))



How can we help these patients?

1 - Assessment





The ICIQ modular questionnaire

Name	Scope of assessment	Domains	Items	Grade
ICIQ-MLUITS (26) (ICQsum61)	Male lower urinary tract symptoms and associated bother.	• Voiding • Incontinence • Individual items: evaluating frequency and nocturia	13	A
ICIQ-FLUTS (28) (BF-FLUTS 28)	Female lower urinary tract symptoms and associated bother.	• Filling • Voiding • Incontinence	12	A
ICIQ-VS (31)	Vaginal symptoms excluding pruritus and associated bother.	• Vaginal symptoms • Sexual matters • Quality of life	14	A
ICIQ-B (32, 33)	Bowel symptoms including and excluding and associated bother	• Bowel control • Quality of life	21	A+
ICIQ-18 (Short Form) (28)	Urinary incontinence.	• Urinary incontinence frequency, overall interference • Personal impact of incontinence	4	A
ICIQ-LUTSqH4_34 (Along with Health Questionnaire)	HRQL issues associated with urinary symptoms and associated bother.	• Life restrictions • Emotional aspects • Physical symptoms	22	A+
ICIQ-MLUITS-Q22	Male sexual matters associated with urinary symptoms and associated bother.	• Sexual matters • Overall interference	4	A
ICIQ-FLUTS-Q22 (BF-FLUTS)	Female sexual matters associated with urinary symptoms and associated bother.	• Sexual matters • Overall interference	4	A
ICIQ-FLUTS Long Form (34) (FLUTS)	Detailed assessment of female lower urinary tract symptoms and associated bother.	• Varied lower urinary tract symptoms	18	A
ICIQ-MLUITS Long Form (36) (MLUITS)	Detailed assessment of male lower urinary tract symptoms and associated bother.	• Varied lower urinary tract symptoms	21	A
ICIQ-N	Comprehensive assessment of symptoms of nocturia and associated bother.	• Frequency • Nocturia • Urgency	2	A
ICIQ-QAB	Comprehensive assessment of symptoms of obstructive bladder and associated bother.	• Frequency • Nocturia • Urgency • Urinary incontinence	4	A
ICIQ-QABq2 (26) (q2)	Detailed assessment of health-related quality of life issues associated with obstructive bladder.	• Coping • Concern/Worry • Sleep • Social interaction	25	A
ICIQ-Nap (NOCU) (37, 38)	Detailed assessment of HRQL issues associated with nocturia.	• Issues associated with sleep disturbance • Life restrictions • Personal measures	13	A+



Assessment

- Patient history (surgery, comorbidities, risk factors, LUTS, quality of life)

Abrams et al. Incontinence 6th edition 2016.

- Voiding diary
- 24 hours pad test

Summary of evidence	LE
A pad test can diagnose urinary incontinence accurately.	2
Standardisation of bladder volume and degree of provocation improves reproducibility.	2
Twenty-four hours is sufficient duration for home-based testing balancing diagnostic accuracy and adherence.	2
Change in leaked urine volume on pad tests can be used to measure treatment outcome.	2

Burkhard et al. EAU guidelines on urinary incontinence in adults 2016. www.uroweb.org



Lower Urinary Tract Symptoms

Filling:

- ▶ Increased frequency
- ▶ Nocturia
- ▶ Urgency
- ▶ Incontinence

Voiding:

- ▶ Poor stream
- ▶ Hesitancy
- ▶ Strain
- ▶ Terminal dribbling

Post-micturition:

- ▶ Post-micturition dribbling
- ▶ Incomplete voiding

Abrams et al. NeuroUrol Urodyn 21:167-178 (2002)



Voiding diary

- 4 days of assessment
- Fluid intake and urine voiding
- Urine volume
- Leakage

Bladder activity:

Score	Meaning
0	Micturition for social reasons, without stimulus
1	Stimulus without urgency
2	Urgency solved before reaching the toilet
3	Urgency until micturition, without leakage
4	Urgency with leakage before reaching the toilet

Bright et al. NeuroUrol Urodyn 31:625-633 (2012)



Part 2 – Conservative management

What is really appropriate?

Conservative treatments

- Neither pharmacological, nor surgical

Abrams et al. NeuroUrol Urodyn 21:167-178 (2002)

- Behavioral interventions
- Pelvic Floor Muscle Training (PFMT)
- Biofeedback (BFB)
- Functional electrical stimulation (FES)
- Extracorporeal magnetic innervation (ExMI)
- Tibial nerve stimulation (PTNS)

Abrams et al. Incontinence 6th edition. 2016.



Recommendations from the literature

Recommendations	GoR
• Lifestyle interventions	NR
• Supervised pelvic-floor muscle training (PFMT) for postprostatectomy stress UI	B
• The use of biofeedback to assist PFMT is currently a therapist/patient decision based on economics and preference	B
• For men with postprostatectomy incontinence, adding electrical stimulation to a PFMT programme does not appear to be of benefit	B
• Scheduled voiding regimes	C
• When there is no evidence of significant postvoid residual urine, antimuscarinic drugs for overactive bladder symptoms, with or without urgency incontinence	A
• α -Adrenergic antagonists (α -blockers) can be added if there is also bladder outlet obstruction	C

GoR = grade of recommendation; NR = no recommendation possible.

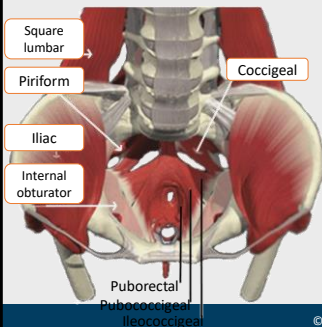
Burkhard FC et al. EAU guidelines on urinary incontinence in adults 2016. www.uroweb.org ICS

Pelvic floor muscle training

Pelvic floor muscle training for post-prostatectomy urinary incontinence	
Pelvic floor muscle training appears to speed the recovery of continence following radical prostatectomy.	1b
Pelvic floor muscle training does not cure urinary incontinence in men post radical prostatectomy or transurethral prostatectomy.	1b
There is conflicting evidence on whether the addition of bladder training, electrical stimulation or biofeedback increases the effectiveness of PFMT alone.	2
Pre-operative PFMT does not confer additional benefit to men undergoing radical prostatectomy.	1b

Burkhard FC et al. EAU guidelines on urinary incontinence in adults 2016. www.uroweb.org ICS

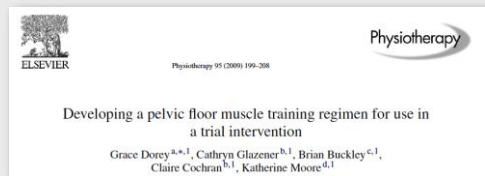
Pelvic floor and continence



- Awareness of pelvic muscular activity
- Training of the levator ani to help the external urethral sphincter (Börgermann et al, 2010)
- Automatic contractions in situations at risk for leakages

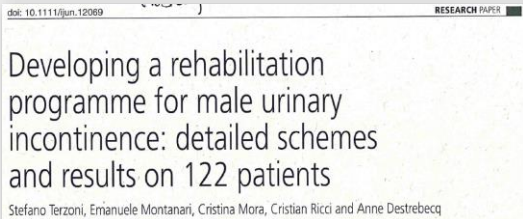
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How to perform PFMTs?



- Progressive exercise -> improvement of pubococcygeal muscle performance
- Simulation of real world situations
- Body posture

ICS



International Journal of Urological Nursing (2015) DOI 10.1111/ijun.12069

ICS

Ideal patients...

- ...young and healthy
- ...able to learn quickly
- ...able to perform the exercises perfectly, even in the long run

Real patients...

- ...can be elderly, with multiple comorbidities, pathologic breathing patterns, postural defects, spinal discs herniations...
- ...can have poor education, or experience difficulties in understanding our indications
- ...can have antagonist synergies, poor self perception, hold their breath, use inappropriate muscles

Chen SY, Tzeng YL, J Nurs Res. 2009;17:83-9
Hay-Smith EJC, Ryan K, Dean S. Physiotherapy. 2007;93:53-61

ICS

What should we tell patients to contract?

Healthy men: muscle displacement in the mid-urethra: "shorten the penis" better than "tighten around the anus" (p=0.007) but not better than "stop the flow" (p=0.187)

Stafford et al. NeuroUrol Urodyn 31: 36-43 (2012)

"Am I doing it right?"

- Importance of feedback during the exercises: self-palpation of the fibrous nucleus
- But:** what if pelvic muscles are too weak to allow sensing contraction clearly?
- Biofeedback or functional electrical stimulation?

ICS

Intra-abdominal pressure

- Rest:** muscular tone is sufficient for urethral closure, if the sphincter is not damaged.
- Walk:** the tone of the external sphincter varies according to the abdominal pressure.

Stafford et al. NeuroUrol Urodyn 31: 36-43 (2012)

ICS

Rehabilitation of PREhabilitation?

Study or Subgroup	Experimental Events	Control Events	Total	Weight	Odds Ratio M-H, Fixed, 95% CI	
Riles 2006	20	47	19	50	10.8%	1.21 [0.54, 2.72]
Centemero 2010	24	59	37	59	22.3%	0.41 [0.19, 0.85]
Geraerts 2013	18	85	14	85	11.2%	1.36 [0.63, 2.95]
Parsikh 2003	6	19	12	19	8.3%	0.27 [0.07, 1.03]
Patel 2013	41	152	50	132	39.7%	0.61 [0.37, 1.00]
Tienforti 2011	8	16	15	16	7.0%	0.07 [0.01, 0.63]
Total (95% CI)	378	361	100.0%	0.64	[0.47, 0.88]	

Preoperative pelvic floor training improves post-prostatectomy continence after 3 months from surgery, but not after 6 months

Chang JL et al. Eur Urol 2015. doi:10.1016/j.eururo.2015.11.004

ICS

Preoperative biofeedback

Study or Subgroup	BFB Events	No BFB Events	Total	Weight	Odds Ratio M-H, Fixed, 95% CI	Year	
Riles 2006	41	47	48	10.9%	0.61 [0.10, 3.83]	2006	
Burgio 2006	34	50	22	46	26.9%	2.32 [1.01, 5.31]	2006
Tienforti 2010	10	16	1	16	3.4%	25.00 [2.60, 240.34]	2010
Collado 2013	31	35	25	43	9.4%	5.58 [1.67, 18.61]	2013
Dijkstra 2013	38	58	36	45	51.4%	0.47 [0.19, 1.18]	2013
Total (95% CI)	157	132	206	100.0%	1.81	[1.14, 2.86]	

Terzoni S et al. 2017 (study in progress)

ICS

Can FES be useful for teaching PFMEs?

- Post-prostatectomy patients who could not learn PFMT were offered FES (leakage reduction <50 gr/day after 6 PFMT consultations/6 weeks, in presence of initial leakage >100 gr/day). FES: 15 min, 250 to 400 microsecs, 30 to 100 Hz, max 60 mA
- Leakage reduction

Terzoni S et al. Int J Urol Nurs 2015; 9(1):29-35

ICS

Take home messages: our patients...

- **Need motivation:** fostered by “enthusiast clinicians”, reinforcement messages and explanations on why they should do the exercises every day in that way
- **Need no taboos:** they’ve been through enough!
- **Need support** when results do not come immediately
- **Need their caregivers:** they’re part of patients’ life!
- **Experience complex situations** if compared to most literature papers: need for evidence-based practice, medical humanities, and commitment.



Thank you



s.terzoni@uroweb.org

