Simposio REHA TICINO 2023

Simposio REHA TICINO

Giovedì 27 aprile 2023, dalle 13.00 alle 17.30

L'importanza di un approccio interdisciplinare nella presa in carico delle disfunzioni pelvi perineali: la nostra esperienza

REHA TICINO
un passo oltre le aspettative

rehaticino.ch

La riabilitazione del pavimento pelvico

Nel paziente neurologico

Chiara Bellini, PT
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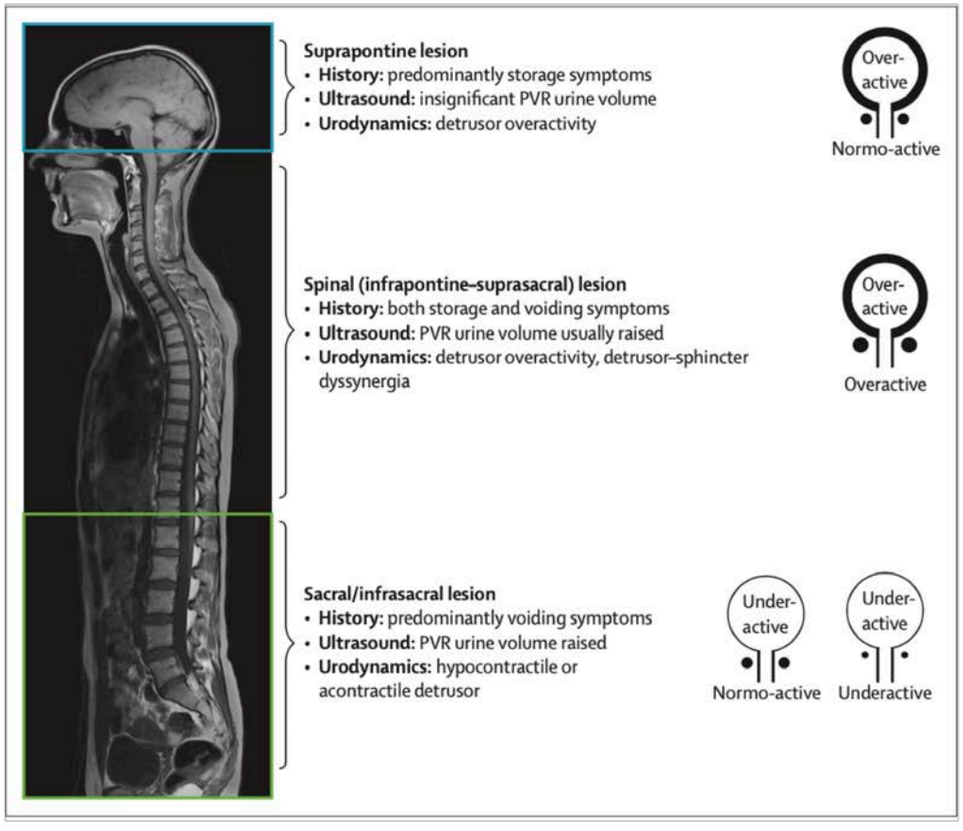
Neurofisiopatologia

I LIVELLI DI LESIONE



Paziente complesso

Sopra pontine
- Lesioni cerebro-vascolari (Ictus..)
- Traumi cerebrali o encefaliti
- Tumori
- Demenzia
- Parkinsonismi (M.di P. /A.M.S.)

Sotto pontine-sopra sacrali
- Lesione midollari
- Sclerosi Multipla
- Mielodisplasia

Sotto sacrali
- Cauda equina
- Traumi pelvici
- Neuropatie periferiche

Disfunzioni urinarie, del colon-retto, sessuali e del pavimento pelvico

Lower urinary tract dysfunction in the neurological patient: clinical assessment and management

Jalesh N Panicker, Clare J Fowler, Thomas M Kessler

THE LANCET Neurology

Table 2: Therapeutic strategies to address various disabilities resulting from multiple sclerosis

Disability/symptom type	Strategy/activities to address disability
Sensory-motor	Active motor training Sensory stimulation Functional electrostimulation Constraint-induced training Tonus regulation Strength training/aerobic training
Gait	Conventional Treadmill Lokomat
Cognition	Memory/attentional training Perception: neglect-training Visual compensation (Nova-Vision)
Speech	Speech therapy
Eating/swallowing	Speech therapy Swallowing assessment and therapy
Bladder and bowel function	Pelvic floor training
Activities of daily living	Self-care Orientation training
Pain	Cryotherapy Soft tissue mobilisation Graded manual traction Muscular stabilisation exercises Neuromuscular facilitation Psychological techniques: hypnosis and virtual reality interventions
Other support	Technical aids Instruction of patients/caregivers Social service/reintegration

Source: Lo et al., 2008;[46] Renom et al., 2014;[48] Pepping et al., 2013;[47] Langdon, 2011;[45] DasGupta et al., 2003;[43] Buzzard et al., 2013;[42] Khan et al., 2015;[44] Svestkova et al., 2010;[49] National Clinical Guideline Centre, 2014.[41]

Approccio multidisciplinare

Nel paziente complesso

Guidelines

International Journal of Stroke WSO

Canadian stroke best practice recommendations: Stroke rehabilitation practice guidelines, update 2015

International Journal of Stroke
0(0) 1–26

DOI: 10.1177/1747493016643553
wso.sagepub.com
SAGE

2.1 Stroke rehabilitation unit care

a. The core rehabilitation professional team should include physiatrists, other physicians with expertise/core training in stroke rehabilitation, occupational therapists, physiotherapists, speech-language pathologists, nurses, social workers and dietitians (Evidence Level A). The social workers, and clinical dietitians (Evidence Level A).

d. Additional members of the interprofessional team may include pharmacists, discharge planners or case managers, (neuro) psychologists, palliative care specialists, recreation and vocational therapists, therapy assistants, spiritual care providers, peer supporters and stroke recovery group liaisons (Evidence Level B).

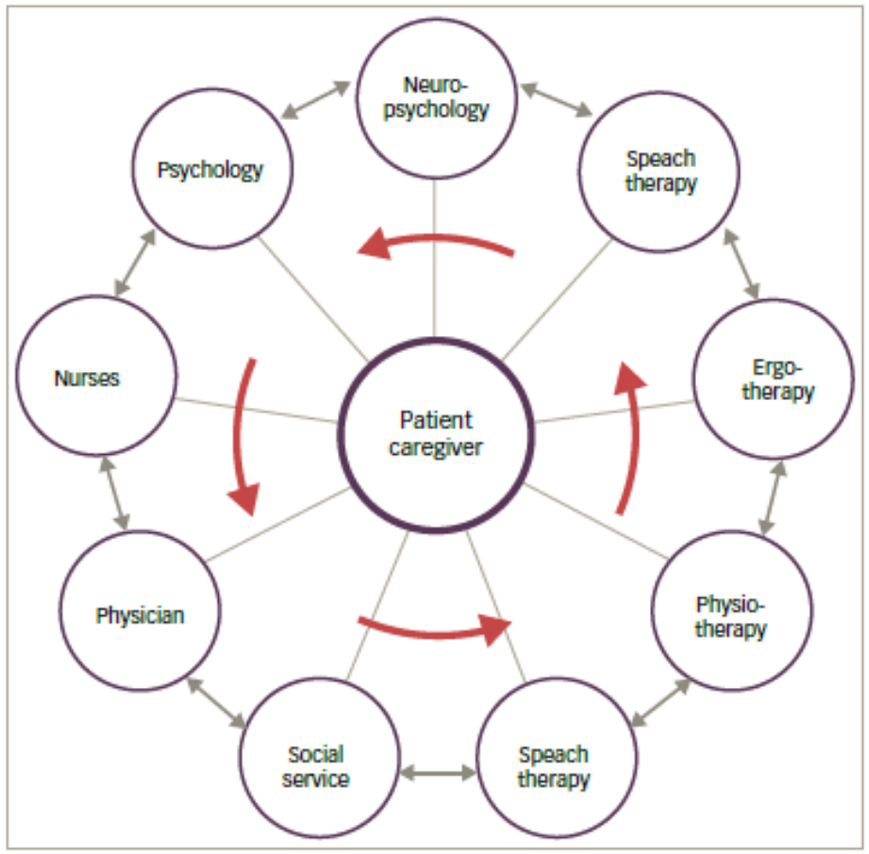
e. Patients, families and caregivers should have early and active involvement in the rehabilitation process (Evidence Level B).

Cochrane Library
Cochrane Database of Systematic Reviews

Multidisciplinary rehabilitation for adults with multiple sclerosis (Review)

Khan F, Turner-Stokes L, Ng L, Kilpatrick T, Amatya B

Figure 2: Coordinated interaction between specialities that is needed in the neurorehabilitation of a patient with multiple sclerosis



DOI: https://doi.org/10.17925/ENR.2017.12.01.31

Linee Guida

INITIAL MANAGEMENT OF NEUROGENIC URINARY INCONTINENCE

HISTORY, LEVEL OF LESION

- Peripheral nerve lesion (e.g. radical pelvic surgery). Sacral cord/cauda equina lesion (e.g. lumbar disc prolapse)
- Suprasacral infrapontine and pontine lesions (e.g. trauma, multiple system atrophy)
- Suprapontine cerebral lesion (e.g. Parkinson's disease, stroke, multiple sclerosis)

CLINICAL ASSESSMENT

- Further history (bowel. sexual function, fertility issues)
- General assessment including of home circumstances
- Urinary diary and symptom score
- Assessment of functional ability, quality of life and desire for treatment
- Physical examination: assessment of sensation in lumbosacral dermatomes, anal tone and voluntary contraction of anal sphincter, bulbocavernosus and anal reflexes, gait, mobility, contractures, hand fuction.
- Urine analysis + culture (if infected: treat as necessary)
- Urinary tract imaging, serum creatinine : if abnormal to specialised management
- Post void residual (PVR) assessment by abdominal examination or optional by ultrasound
- Invasive UDS in select patient populations (eg. spinal cord injury, meningomeylocele)

This assessment will give basic information, but does not yield precise neurourological diagnosis

PRESUMED DIAGNOSIS

- Stress urinary incontinence due to sphincter incompetence with negligible PVR
- Urinary incontinence due to detrusor overactivity
  - Urinary incontinence associated with poor bladder emptying (significant PVR)
  - With negligible PVR

MANAGEMENT*

- Behavioural modification (C)
- External appliances (B)

Failure

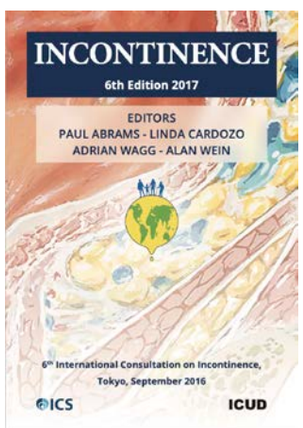
- Intermittent catheterisation ** with or without antimuscarinics (A)

Depending on co-operation and mobility:
- Behavioural modification, (C)
- Antimuscarinics (A) /beta 3 agonists (D)
- Continence products (B)
- Indwelling catheter (C)

Failure

SPECIALISED MANAGEMENT

* Consider CONTINENCE PRODUCTS for temporary support during treatment
** Some patients omit IC through personal choice or inability to self catheterise
***Add complimentary bowel management in all cases



Obiettivi

The primary **aims** *for treatment of neuro-urological symptoms, and their* **priorities**, *are:*

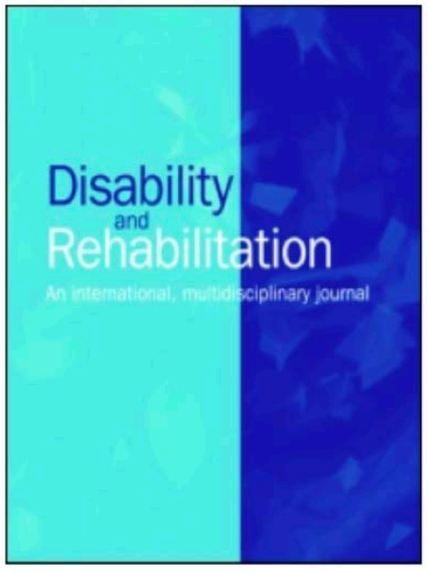
- *Protection of the UUT*
- *Keeping the detrusor pressure during both the filling and voiding phases within safe limits significantly reduces the mortality from urological causes*
- *Avoid bladder overdistentions*
- *Achievement (or maintenance) of urinary continence*
- *UTI Prevention*
- *Avoid significant PVR*
- ***Improvement of the patient's QoL***
- *Management of Bowel and Sexual Dysfunctions*

EAU Guidelines on

Neuro-Urology

B. Blok (Chair), D. Castro-Diaz,
G. Del Popolo, J. Groen, R. Hamid, G. Karsenty, T.M. Kessler,
J. Pannek (Vice-chair)
Guidelines Associates: H. Ecclestone, S. Musco,
B. Padilla-Fernández, A. Sartori, L.A. 't Hoen

Obiettivi



DISABILITY AND REHABILITATION
https://doi.org/10.1080/09638288.2019.1652702

Taylor & Francis
Taylor & Francis Group

Check for updates

REVIEW ARTICLE

Dietary management of neurogenic bowel in adults with spinal cord injury: an integrative review of literature

Hiu Yan Yeung[a], Priya Iyer[b], Julie Pryor[c] and Margaret Nicholson[a]

[a]Nutrition and Dietetics, University of Sydney, Sydney, Australia; [b]Nutrition and Dietetics, Royal Rehab Centre Sydney, Sydney, Australia; [c]Nursing Research and Development, Royal Rehab Centre Sydney, Sydney, Australia

- *Self-management of regular and predictable bowel emptying at a socially acceptable time and place;*

- *Using minimal physical and pharmacological interventions to achieve complete bowel emptying within an acceptable time- frame;*

- *The prevention of bowel accidents, constipation, autonomic dysreflexia (which can be life threatening), and other complications*

Disfunzioni

- **Interventi scelti sulla base delle disfunzioni che presenta il paziente (spesso combinate) e tenendo conto della globalità della persona.**

	Storage dysfunction		Voiding dysfunction
	Urgency, frequency, with or without incontinence	Stress incontinence	
Conservative	Behavioural therapy; antimuscarinic agents; desmopressin; onabotulinumtoxinA into the detrusor; β_3-adrenoceptor agonists*; tibial neuromodulation*	Pelvic floor muscle exercises	Intermittent catheterisation; indwelling catheterisation; triggered voiding; α-adrenoceptor blockers*; onabotulinumtoxinA into the external sphincter*
Surgical	Sacral neuromodulation*; bladder augmentation; sacral deafferentation/anterior root stimulation; continent/ incontinent urinary diversion	Bulking agents*; autologous/synthetic slings; balloons*; artificial sphincter; continent/incontinent urinary diversion	Sacral neuromodulation*; intraurethral stents*; external sphincter/bladder neck incision; transurethral resection of prostate; continent/incontinent urinary diversion

In the case of combined storage and voiding dysfunction, treat the more dominant component first. *Treatments for which there is only limited evidence.

***Table 2*: Management of lower urinary tract dysfunction in the neurological patient**

- *Disturbi dello svuotamento urinario*
- *Disturbi del riempimento urinario*
- *Stipsi da rallentato transito*
- *Stipsi da defecazione ostruita*
- *Incontinenza fecale*
- *Dolore pelvico*
- *Disturbi della sfera sessuale*
- *Deficit sensitivi dell'area sacrale*
- *Disfunzioni del piano pelvico*

CrossMark

Lower urinary tract dysfunction in the neurological patient: clinical assessment and management

Jalesh N Panicker, Clare J Fowler, Thomas M Kessler

Alcune proposte terapeutiche

Utilizzo di scale validate

Versione italiana dell'Intermittent Self-Catheterization Questionnaire.

Online version at http://www.minervamedica.it

Minerva Urologica e Nefrologica 2017 August;69(4):384-90
DOI: 10.23736/S0393-2249.16.02744-2

ORIGINAL ARTICLE

Development and validation of the Italian version of the Intermittent Self-Catheterization Questionnaire

Giorgio SCIVOLETTO [1, 2] *, Stefania MUSCO [3], Cosimo DE NUNZIO [4], Giulio DEL POPOLO [5] on behalf of the Gruppo di Studio sul Cateterismo

[1]Spinal Unit, IRCCS Fondazione S. Lucia, Rome, Italy; [2]Spinal Rehabilitation (SpiRe) Lab, IRCCS Fondazione S. Lucia, Rome, Italy; [3]Spinal Unit, Montecatone Rehabilitation Institute, Imola, Italy; [4]Department of Urology, Sant'Andrea Hospital, Sapienza University of Rome, Rome, Italy; [5]Spinal Unit, Azienda Ospedaliera Universitaria Careggi, Florence, Italy

*Corresponding author: Giorgio Scivoletto, Spinal Cord Unit, IRCCS Fonfazione S. Lucia, via Ardeatina 306, 00179, Rome, Italy. E-mail: g.scivoletto@hsantalucia.it

Non solo per fini di ricerca scientifica ma anche perchè sono degli ottimi strumenti per la raccolta dati, utili per impostare il trattamento riabilitativo

Alcune proposte terapeutiche

Diario minzionale e valutazione del RPM tramite Bladder scan

Valutazione completa dei sintomi e della funzionalità vescicale (Stool diary)*

BLADDER DIARY **YOUR NAME:** _____

Please complete this **3 day** bladder diary. Enter the following in each column against the time. You can change the specified times if you need to. In the time column, please write **BED** when you went to bed and **WOKE** when you woke up.

Drinks Write the amount you had to drink and the type of drink.

Urine output Enter the amount of urine you passed in millilitres (mls) in the urine output column, day and night. Any measuring jug will do. If you passed urine but couldn't measure it, put a tick in this column. If you leaked urine at any time write **LEAK** here.

Bladder sensation Write a description of how your bladder felt when you went to the toilet using these codes

0 – If you had no sensation of needing to pass urine, but passed urine for "social reasons", for example, just before going out, or unsure where the next toilet is.

1 – If you had a normal desire to pass urine and no urgency. "*Urgency" is different from normal bladder feelings and is the sudden compelling desire to pass urine which is difficult to defer, or a sudden feeling that you need to pass urine and if you don't you will have an accident.*

2 – If you had urgency but it had passed away before you went to the toilet.

3 – If you had urgency but managed to get to the toilet, still with urgency, but did not leak urine.

4 – If you had urgency and could not get to the toilet in time so you leaked urine.

Pads If you put on or change a pad put a tick in the pads column.

Here is an example of how to complete the diary.

Time	Drinks		Urine output	Bladder sensation	Pads
	Amount	Type			
6am WOKE			350ml	2	
7am	300ml	tea			
8am			✓	2	
9am					
10am	cup	water	Leak	3	✓

DAY 1 **DATE**: ____/____/____

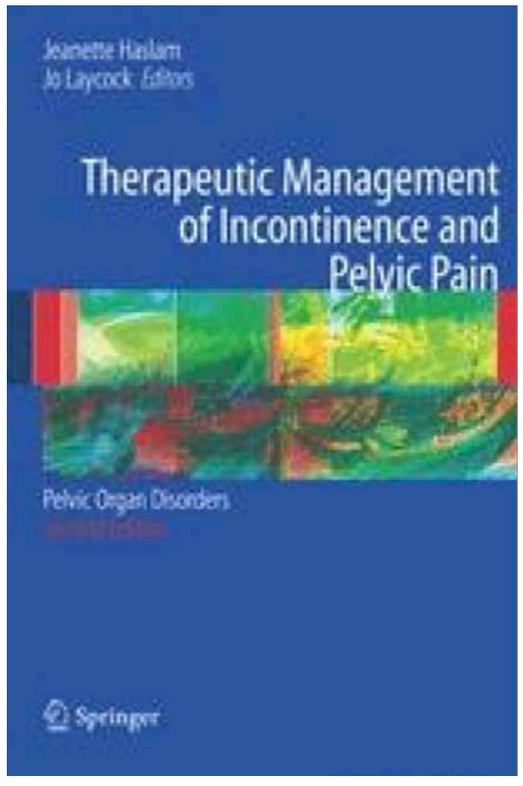
Time	Drinks Amount	Drinks Type	Urine output (mls)	Bladder sensation	Pads
6am					
7am					
8am					
9am					
10am					
11am					
Midday					
1pm					
2pm					
3pm					
4pm					
5pm					
6pm					
7pm					
8pm					
9pm					
10pm					
11pm					
Midnight					
1am					
2am					
3am					
4am					
5am					

ICI-Q- Bladder diary

Foto: Verathon

Alcune proposte terapeutiche

- Counseling riabilitativo
- Counseling sessuologico
- Strategie di coping
- Continence Products
- Terapia comportamentale



Prompted voiding

Bladder training

Schedule voiding

Bladder Diet

Journal of Parkinson's Disease 11 (2021) 857–864
DOI 10.3233/JPD-202491
IOS Press

Research Report

Pelvic Floor Health in Women with Parkinson's Disease

Ankita Gupta[a], Kathrin LaFaver[b,1], Kevin R. Duque[c], Anushree Lingaiah[b], Kate V. Meriwether[a,2], Jeremy Gaskins[d], Josephine Gomes[e], Alberto J. Espay[c] and Abhimanyu Mahajan[c,3,*]

Behavioral therapy to treat urinary incontinence in Parkinson disease

C.P. Vaughan, MD
J.L. Juncos, MD
K.L. Burgio, PhD
P.S. Goode, MD
R.A. Wolf, MPH
T.M. Johnson II, MD

This study demonstrates feasibility and efficacy of pelvic floor muscle exercise-based behavioral therapy to treat UI in older patients with PD. These results are promising and should be evaluated in randomized controlled trials.

Alcune proposte terapeutiche

Training al cateterismo intermittente

E.A.U. Neuro-urology Guideline 2020
http://www.uroweb.org/

Raccomandazioni	Valutazione di forza
Utilizzare il cateterismo intermittente, quando possibile una tecnica asettica, come trattamento standard per i pazienti che non sono in grado di svuotare la vescica.	Forte
Istruire accuratamente i pazienti sulla tecnica e sui rischi del cateterismo intermittente.	Forte
Evitare il cateterismo permanente transuretrale e sovrapubico quando possibile.	Forte

Urinary incontinence associated with poor bladder emptying (significant PVR)

- **Intermittent catheterisation ** with or without antimuscarinics (A)**

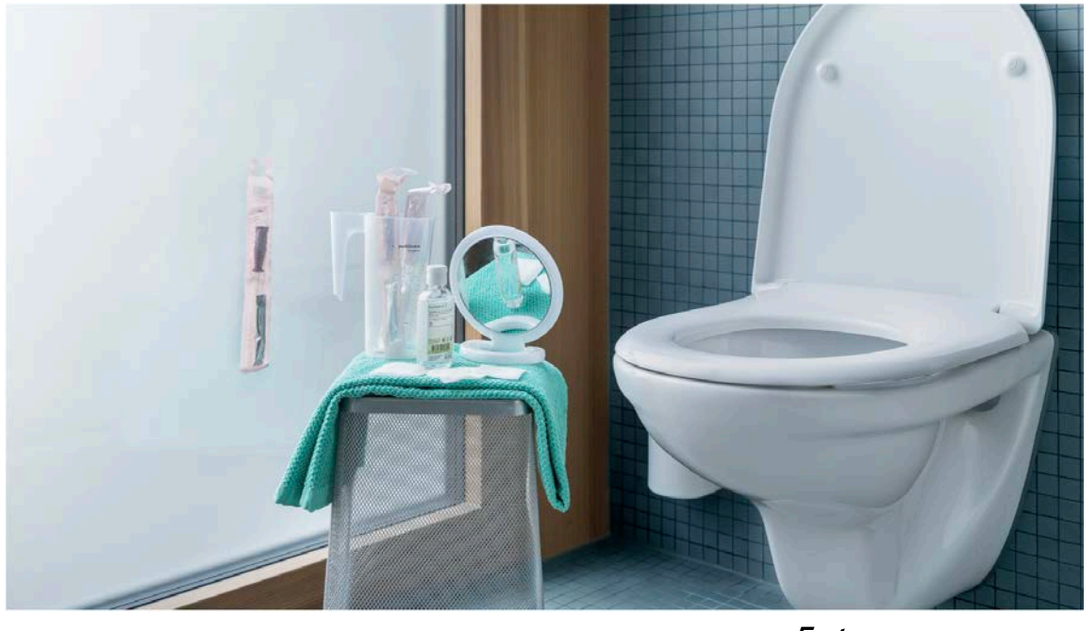


Foto: publicare.ch

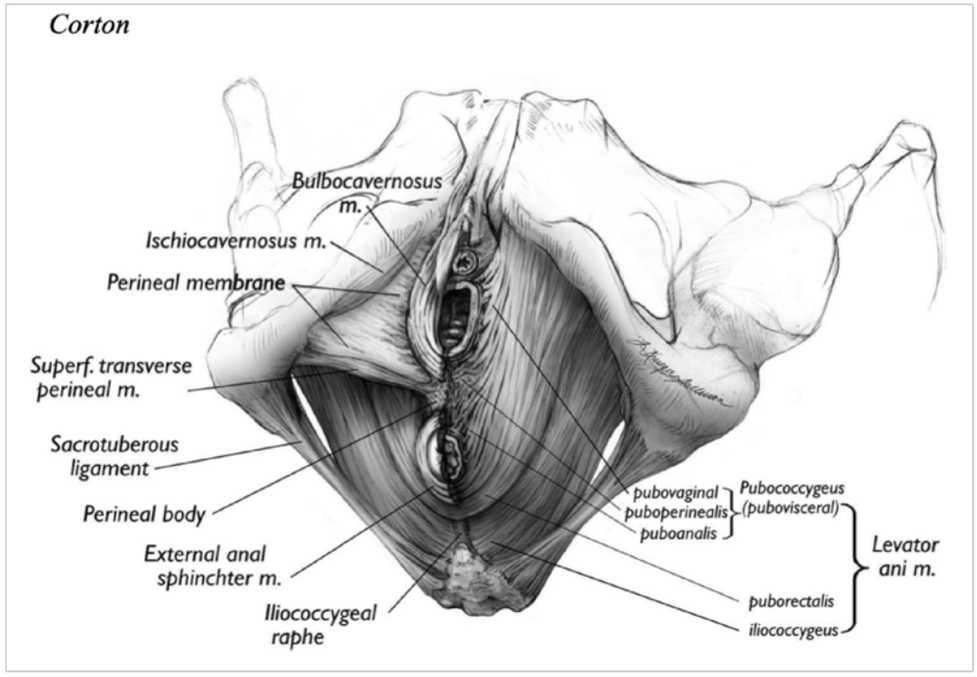
Bansky

Rispettare i tempi dell'elaborazione della perdita di funzione

Alcune proposte terapeutiche

PFMT (Pelvic Floor Muscles Training)

- *Inibitore afferente → Almeno 8 secondi contrazione tonica submassimale → inibisce lo stimolo*
- *Inibitore efferenze → Contrazione PP → inibisce la OAB e anticipa la fuga di urina*
- *Aumento della pressione di chiusura uretrale*
- *Impact on functional performance , bowel and sexual function*



Corton MM. Anatomy of the pelvis: how the pelvis is built for support. Clin Obstet Gynecol. 2005 Sep;48(3):611-26. doi: 10.1097/01.grf.0000170578.24583.64. PMID: 16012229.

Progrès en urologie (2018) xxx, xxx–xxx
Disponible en ligne sur ScienceDirect www.sciencedirect.com
Elsevier Masson France EM|consulte www.em-consulte.com
ELSEVIER
ARTICLE ORIGINAL

Démonstration neurophysiologique d'un réflexe périnéo-vésico-sensitif inhibiteur

Evidence of sensory bladder inhibitor reflex

World J Urol (2003) 20: 374–377
DOI 10.1007/s00345-002-0309-9
FREE PAPER

Ahmed Shafik · Ismail A. Shafik

Overactive bladder inhibition in response to pelvic floor muscle exercises

Int Urogynecol J (2005) 16: 187–191
DOI 10.1007/s00192-004-1232-y
ORIGINAL ARTICLE

Kaven Baessler · Kirstin Miska · Ruth Draths
Bernhard Schuessler

Effects of voluntary pelvic floor contraction and relaxation on the urethral closure pressure

International Urology and Nephrology
https://doi.org/10.1007/s11255-021-02804-y
UROLOGY - ORIGINAL PAPER

The effect of pelvic floor exercise program on incontinence and sexual dysfunction in multiple sclerosis patients

Bengu Altunan[1] · Asli Aksoy Gundogdu[1] · Tugba Ilkem Kurtoglu Ozcaglayan[2] · Aysun Unal[1] · Nilda Turgut[1]

Received: 28 October 2020 / Accepted: 8 February 2021

Alcune proposte terapeutiche

PTNS(percutaneous tibial nerve stimulation)

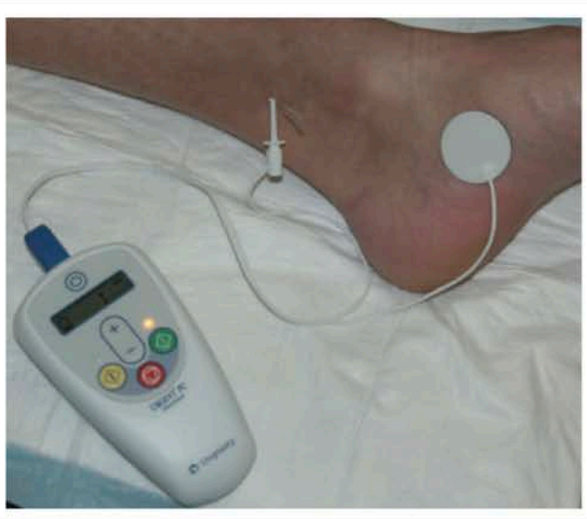
Int Urogynecol J
DOI 10.1007/s00192-015-2814-6

REVIEW ARTICLE

Posterior tibial nerve stimulation in the management of lower urinary tract symptoms in patients with multiple sclerosis

Chiara Zecca[1] · Letizia Panicari[1] · Giulio Disanto[1] · Paolo Maino[2] · Anand Singh[3,4] · G Alessandro Digesu[3,4,5,6] · Claudio Gobbi[1]

1 Department of Neurology, Neurocenter of Southern Switzerland, Ospedale Regionale di Lugano, Lugano, Switzerland.



Conclusions: PTNS appears to be an effective and safe treatment option in the management of LUTS in patients with MS

(Govaert et Al.,2010)

Original Research Paper

Effectiveness of percutaneous posterior tibial nerve stimulation for the management of bowel dysfunction in multiple sclerosis patients

Rosaria Sacco, Andrea Braga, Giulio Disanto, Giuseppe Alessandro Digesu, Paolo Maino, Eva Koetsier, Giorgio Caccia, Maurizio Serati, Julien Renard, Claudio Gobbi and Chiara Zecca

Conclusion: PTNS represents a valid minimally invasive alternative treatment for MS patients suffering from NBDs. FI & FC

2014 Cochrane review did not find an adequate level of evidence for making any strong recommendations for the management of NBDs in MS patients.[30]

Our study provides supportive evidence for PTNS in the treatment of NBDs in MS. To our knowledge,

Management of faecal incontinence and constipation in adults with central neurological diseases (Review)

Coggrave M, Norton C, Cody JD

THE COCHRANE COLLABORATION®

Alcune proposte terapeutiche

Percutaneous tibial nerve stimulation (PTNS)

Neurourology and Urodynamics 28:320–324 (2009)

Percutaneous Tibial Nerve Stimulation Produces Effects on Brain Activity: Study on the Modifications of the Long Latency Somatosensory Evoked Potentials

Enrico Finazzi-Agrò,[1,2*] Camilla Rocchi,[3] Christa Pachatz,[3] Filomena Petta,[1] Enrico Spera,[1,4] Francesco Mori,[3] Francesco Sciobica,[2] and Girolama A. Marfia[3]
[1]Department of Surgery, Chair of Urology, Tor Vergata University, Tor Vergata University Hospital, Rome, Italy
[2]Fondazione Santa Lucia, IRCCS, Rome, Italy
[3]Department Of Neurosciences, Chair of Neurology, Tor Vergata University, Tor Vergata University Hospital, Rome, Italy
[4]Policlinico Casilino Hospital, Rome, Italy

Objective: Long-latency somatosensory evoked potentials (LL-SEP) provide information on the function of somatosensory cortical structures. Percutaneous tibial nerve stimulation (PTNS) is indicated in the treatment of lower urinary tract dysfunction. Aim of this study was to evaluate LL-SEP in patients with overactive bladder syndrome (OAB) treated by means of PTNS. **Methods:** Sixteen female patients with a diagnosis of pharmacoresistant OAB underwent PTNS while eight female patients with the same diagnosis underwent sham stimulation. LL-SEP were performed at baseline and at the end of PTNS or sham stimulation. Peak latency and peak to peak amplitude of P80, P100, and P200 waves were measured. **Results:** Mean latency of P80, P100, and P200 and mean amplitude of P200 did not show any significant change after both stimulation. Mean amplitude of P80 and P100 waves increased significantly after PTNS while it did not vary after sham stimulation. **Conclusion:** The P80 and P100 amplitude increase might reflect long-term modifications in synaptic efficiency through the somatosensory pathway. The plastic reorganization of cortical network triggered by peripheral neuromodulation can be hypothesized as a mechanism of action of PTNS. Further studies are needed to correlate LL-SEP modifications after PTNS with the success of the treatment. *Neurourol. Urodynam. 28:320–324, 2009.*

Key words: long term potentiation; neuromodulation; overactive bladder; percutaneous tibial nerve stimulation; somatosensory evoked potentials;

PTNS: the electrical stimulation of the tibial posterior nerve is related to reorganization(neuromodulation) of spinal reflexes and regulation of cortical activity.

MedicalRF.com/Getty Images

Alcune proposte terapeutiche

Sensory re-learning

Sensory Re-Education after Nerve Repair: Aspects of Timing

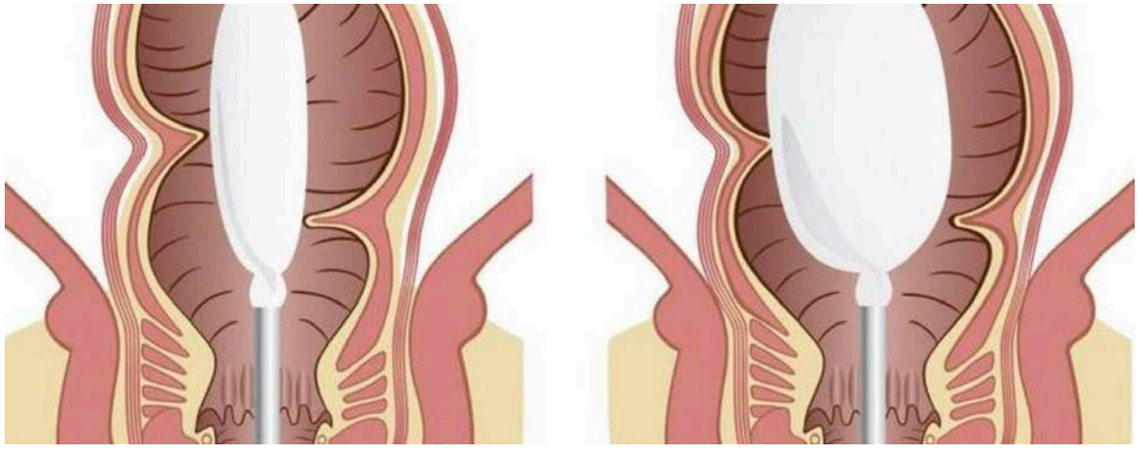
Wiederherstellung der Sensibilität und Nervenrekonstruktion: zeitliche Aspekte

B. Rosén
G. Lundborg

Possono verificarsi intorpidimento, formicolio, ipersensibilità, allodinie e vari gradi di perdita sensoriale (Tattile, dolorifica, termica, propriocettiva; perineale ed endocavitaria)

Sensory re-learning is a technique that therapists use in attempt to retrain sensory pathways or stimulate unused pathways (Emotional responses)*

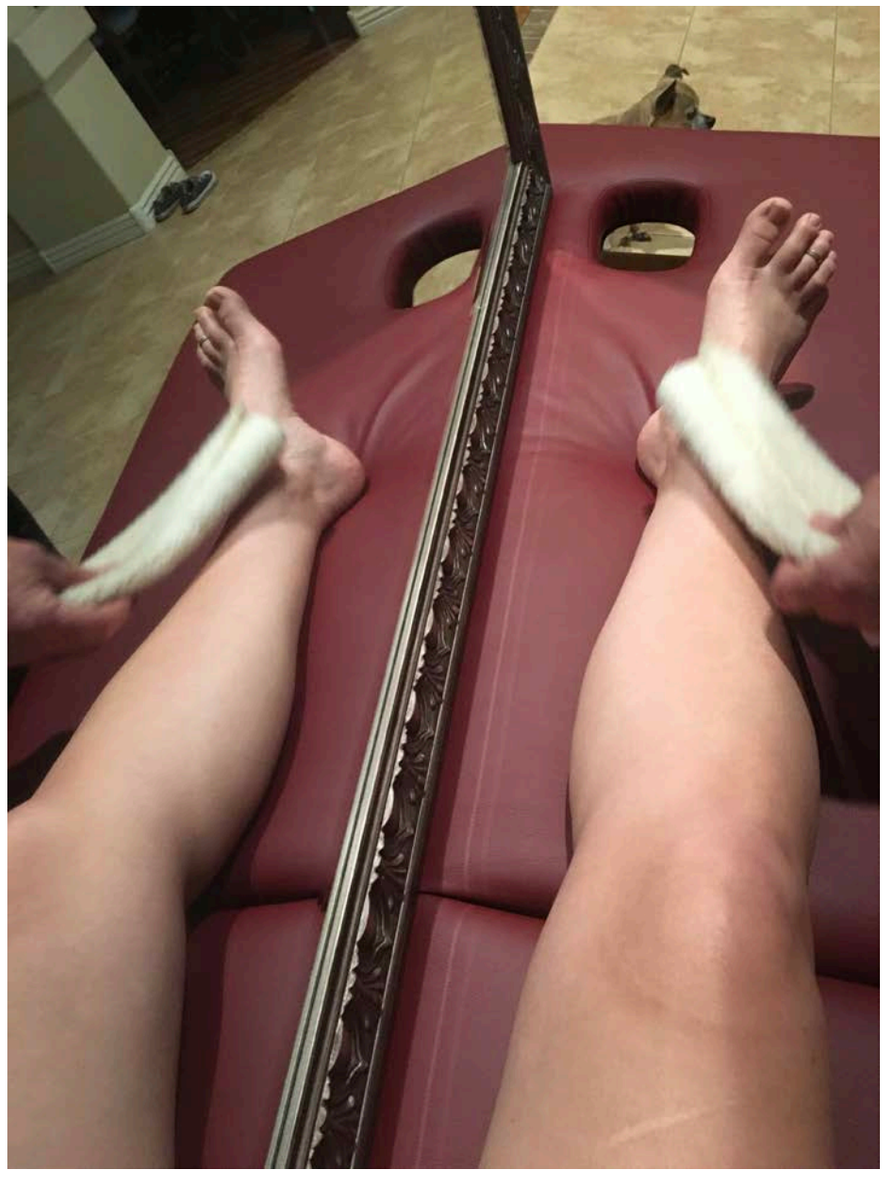
Riabilitazione volumetrica



NEUROSCIENCE
RESEARCH ARTICLE

Y.-H. Chen et al. / Neuroscience 481 (2022) 123–133

Greater Cortical Activation and Motor Recovery Following Mirror Therapy Immediately after Peripheral Nerve Repair of the Forearm



* Anand KS, Dhikav V. Hippocampus in health and disease: An overview. *Ann Indian Acad Neurol*. 2012;15(4):239-46. doi:10.4103/0972-2327.104323

Nuove frontiere

Clinical Trial TASCI

EUROPEAN UROLOGY FOCUS XXX (2019) XXX–XXX

available at www.sciencedirect.com
journal homepage: www.europeanurology.com/eufocus

Clinical Studies Update – Neuro-urology

Update from TASCI, a Nationwide, Randomized, Sham-controlled, Double-blind Clinical Trial on Transcutaneous Tibial Nerve Stimulation in Patients with Acute Spinal Cord Injury to Prevent Neurogenic Detrusor Overactivity

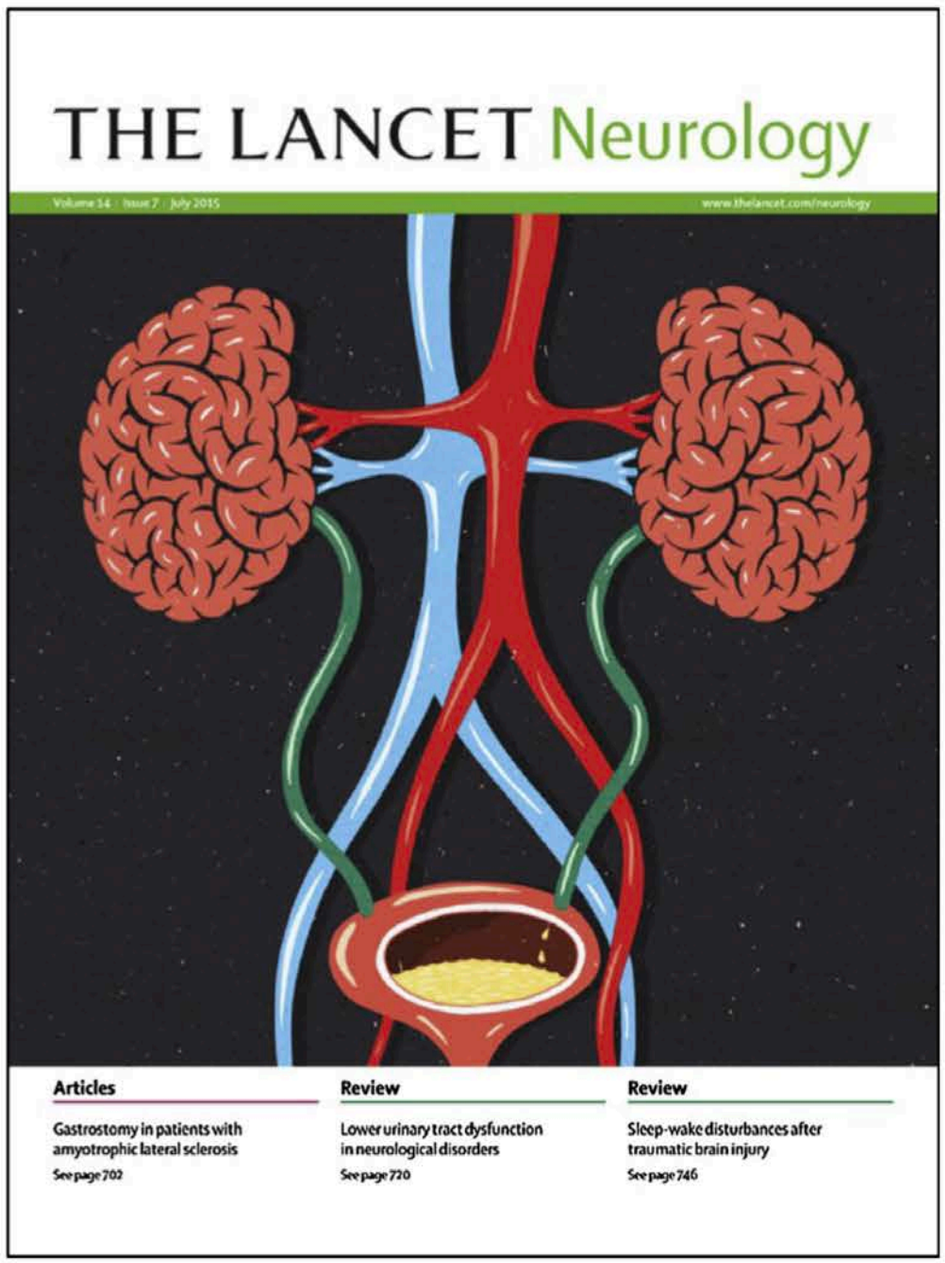
SWISS CONTINENCE FOUNDATION

Martina D. Liechti [a], Stéphanie van der Lely [a], Stephanie A. Stalder [a], Collene E. Anderson [a,b,c], Veronika Birkhäuser [a], Lucas M. Bachmann [d], Martin W.G. Brinkhof [b,c], Armin Curt [e], Xavier Jordan [f], Lorenz Leitner [a], Ulrich Mehnert [a], Sandra Möhr [g], Jürgen Pannek [h,i], Martin Schubert [e], Thomas M. Kessler [a,], for the TASCI Study Group*

[a] Department of Neuro-Urology, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; [b] Department of Health Sciences and Medicine, University of Lucerne, Lucerne, Switzerland; [c] Swiss Paraplegic Research, Nottwil, Switzerland; [d] Medignition Inc. Research Consultants, Zürich, Switzerland; [e] Neurology, Spinal Cord Injury Center, Balgrist University Hospital, University of Zürich, Zürich, Switzerland; [f] Clinique Romande de Réadaptation, Sion, Switzerland; [g] Neuro-Urology, REHAB Basel, Basel, Switzerland; [h] Neuro-Urology, Swiss Paraplegic Center, Nottwil, Switzerland; [i] Department of Urology, Inselspital, Bern University Hospital, Bern, Switzerland

"Prevention before treatment"

L'ipotesi dello studio è che la stimolazione transcutanea precoce del nervo tibiale posteriore possa prevenire l'insorgenza di iperattività detrusoriale neurogena , la dissinergia vescico-sfinterica e il conseguente danno al tratto urinario superiore e l'incontinenza urinaria



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