COMORBILITA' FUTURE NELLE BAMBINE CON DISTURBI MINZIONALI ED EVACUATIVI

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COMORBILITA' FUTURE NELLE BAMBINE CON DISTURBI MINZIONALI ED EVACUATIVI

AU  TO 

NO  MY

DYSFUNCTIONAL VOIDINGS

… are commonly encountered in school-aged

2% to 7%

daytime wetting can be
socially and psychologically distressing
for the affected child.

Lee SD, et al. Acta Paed Scand 1988: 148–53; Blomfield JM, et al. Lancet 1956:850–52; Jarvelin MR, et al. Acta Paed Scand 1988:148–153; Hellstrom A-L, et al. Eur J Ped 1990: 434–37.

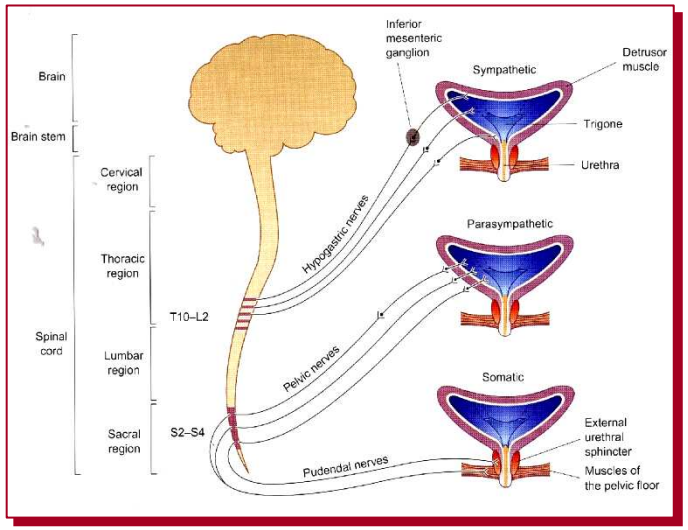
Baseline annual resolution rate 15%.

Bloom DA. BJU Inter. 2000; 85:43-46

DEVELOPMENT OF CONTINENCE

Micturition occurs in the **aroused** or **awake state**

There is electroencephalographic evidence of cortical arousal during sleep in response to bladder distension



To serve as an **adequate reservoir** the bladder capacity normally increases by about 30 ml per year until puberty

"EXPECTED BLADDER CAPACITY"

[30 + (yrs x 30)] ml

until 12 yrs (max 390 ml)

Nevéus T, J Urol. 2006;176(1):314-24.

AT BETWEEN 1 and 3 YEARS

At between 1 and 3 years of age the cortical inhibitory pathways to and from the pontine micturition center develop, allowing the child to have voluntary control over the reflexes that control the detrusor and sphincter muscles.

Yeung CK, et al. Br J Urol 1995; 76:235–240.
Jansson U-B, et al. J Urol 2000; 164:2050–2054.

- aware of bladder fullness
- voluntarily initiate or inhibit a detrusor contraction
- suppress voiding at socially inappropriate time
- fully co-ordinated
- residual urine disappeared

AT BETWEEN 4 and 5 YEARS

By 4 years of age, most children have normal urinary bladder control. The sphincter reflexively **constricts** during bladder filling and **relaxes** during a voluntary detrusor contraction allowing voiding to occur.

- learned to postpone micturition
- is able to initiate micturition **EVEN** if the bladder is **NOT FULL**

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Nurs Stand. 1990 Jul 25-31;4(44):25-7.

Enuresis. Bedwetting--the last taboo.

Dobson P.

PMID: 2119688 [PubMed - indexed for MEDLINE]

Urologia Internationalis

Ferrara P, Nicoletti A, Emmanuele V, Chiozza ML, Aceto G, Del Gado R, Caione P:

Toll-Free Telephone Medical Information on Nocturnal Enuresis: The First Italian Experience over a Two-Year Period.

Urol Int 2009;82:143-146 (DOI: 10.1159/000200788)

Only 40% of italian parents consulted a pediatrician and 8% admitted the use of treatment for the condition.

DISTURBI MENTALI 519

307.52 Pica
Appetito pervertito di origine non organica

307.53 Disturbo da ruminazione
Rigurgito di cibo con reingestione, di origine non organica

Escl: ruminazione ossessiva (300.3)

307.54 Vomito psicogeno

307.59 Altri
Disturbo della nutrizione dell'infanzia e della prima fanciullezza di origine non organica
Disturbi dell'alimentazione nell'infanzia di origine non organica
Perdita dell'appetito di origine non organica

307.6 Enuresi
Enuresi (primaria) (secondaria) di origine non organica

Escl: enuresi da causa non specificata (788.3)

308.0 Disturbi predominanti dell'emotività
Ansia, crisi emotiva o stato di panico quali reazioni acute a gravi stress

308.1 Disturbi predominanti della coscienza
Fughe quali reazioni acute a gravi stress

308.2 Disturbi predominanti della sfera psicomotoria
Stati di agitazione e stupore quali reazioni acute a gravi stress

308.3 Altre reazioni acute allo stress
Disturbo situazionale acuto
Disturbo da stress acuto

Escl: disturbo emotivo post-traumatico prolungato (309.81)

308.4 Disturbi misti quali reazioni allo stress

308.9 Reazioni acute allo stress non specificate

309 Reazione di adattamento
Incl.: disturbi di adattamento
reazione (adattamento) a stress cronici

Escl: reazione acuta a stress gravi (308.0-308.9)
disturbi nevrotici (300.0-300.9)

DSI
EMATICO

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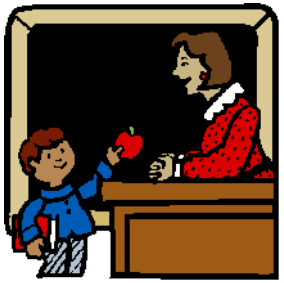
Teachers' knowledge of normal and abnormal elimination patients in elementary school children *J Sch Nurs 2005; 21: 346-49*



N. 467 Elementary school teachers Iowa

- **37%** → ask children to wait to go to the bathroom
- **18%** → received information about abnormal elimination
- **8%** → were aware of specialist trained to treat children with these problems

Suboptimal conditions exist in the bathrooms

only 35% boys' restrooms
only 48% girls' restrooms
} "always clean"

Because children spend nearly half of their waking house at school, there is the potential for school to have a significant impact in their elimination patterns

Apprendimento della minzione

Quadro urodinamico

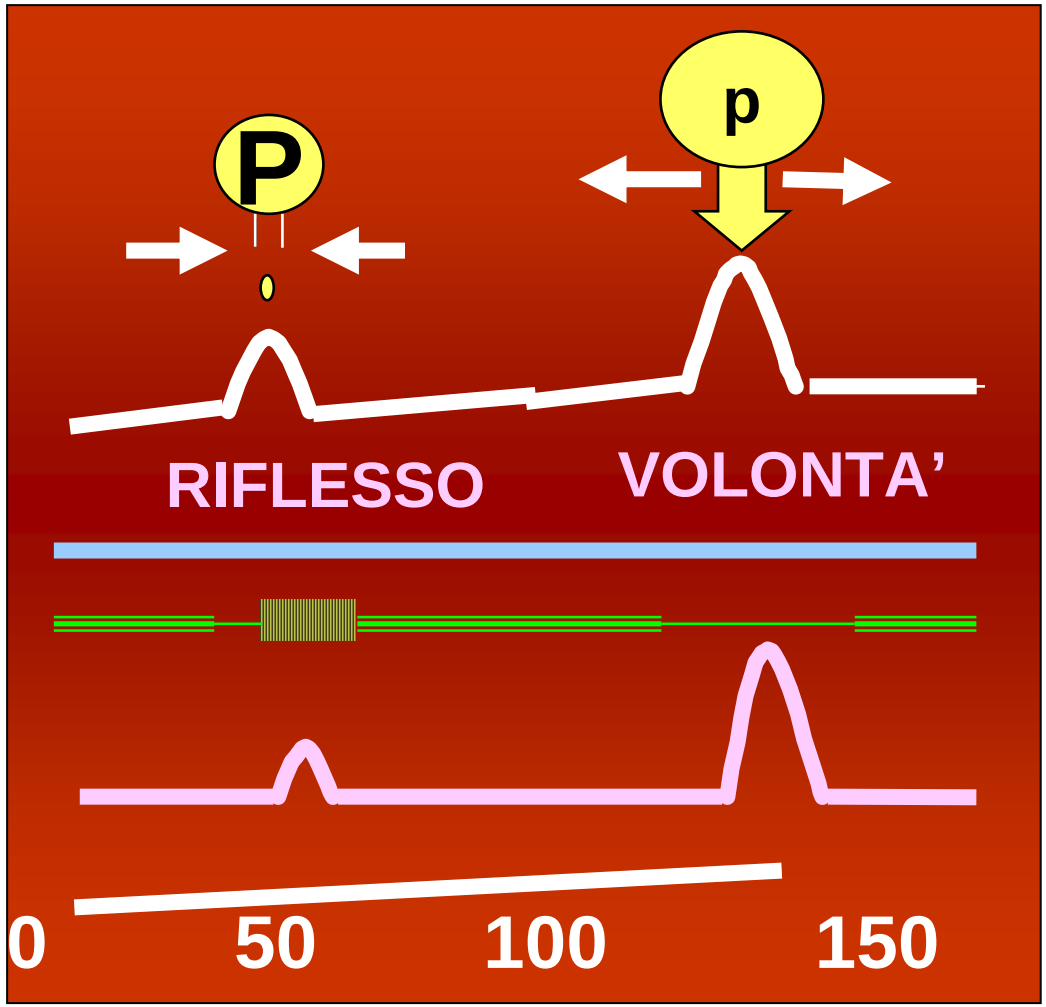
P.Vescicale

P.Addominale

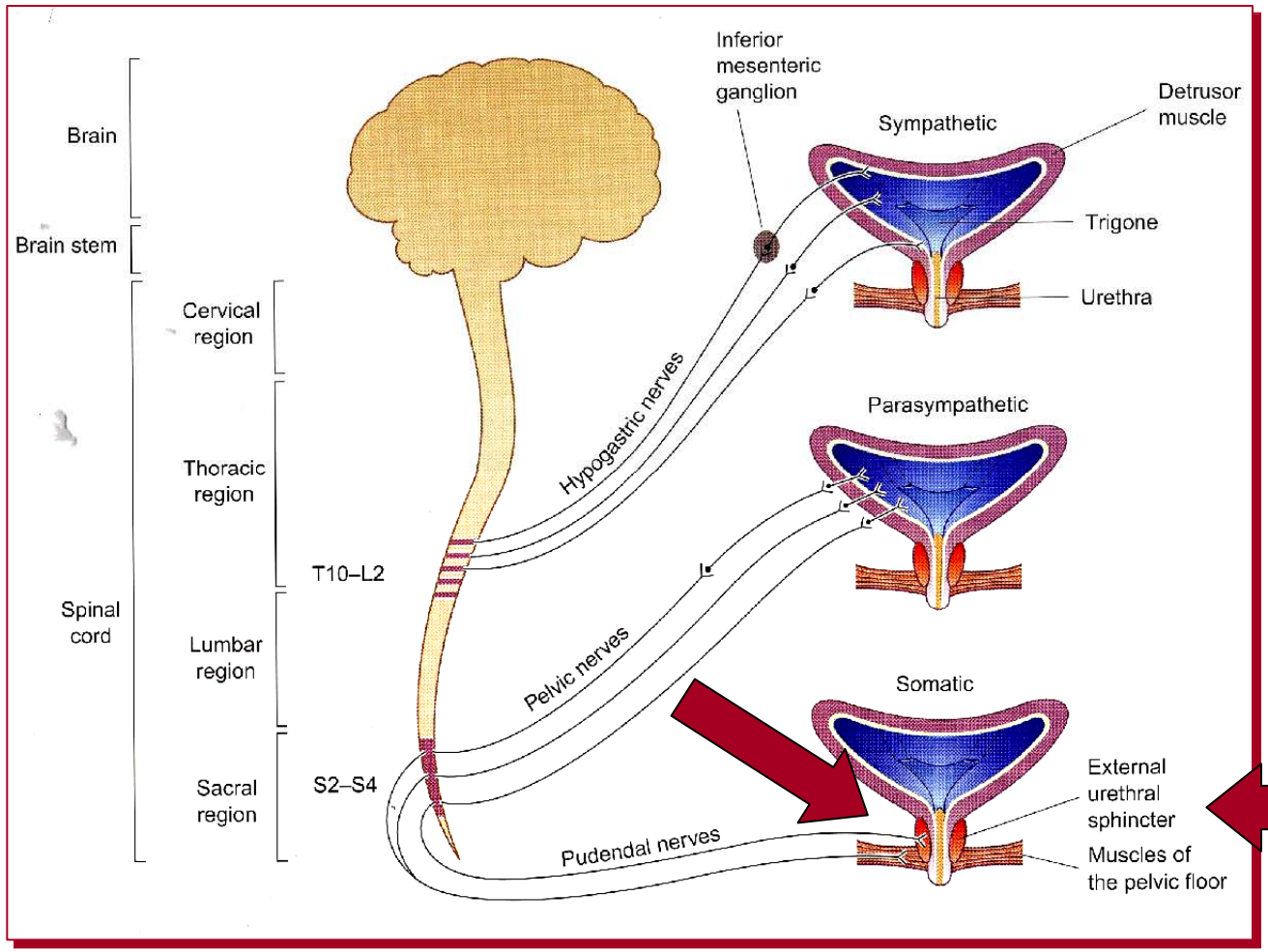
EMG sfintere

Flusso urinario

Volume



DEVELOPMENT OF URINARY CONTROL



Dysfunction

Elimination

Syndrome

DES Disfunctional Elimination Syndrome

Frequency of UTI was significantly higher in the chronic functional constipation.

Kasiga E, et al. Turk J Pediatr 2004; 48: 340-43

Constipation in children INCREASES the LIKELIHOOD of urinary incontinence, bladder overactivity, dyscoordinated voiding, a large capacity, poorly emptying bladder, recurrent UTI and deterioration of VUR.

There are a number of resolution of bladder symptoms after successful treatment of constipation

Dohil R, el al. Constipation and reversible urinary tract abnormalities. Arch Dis Child 1994; 70: 56

PRIMARY BLADDER NECK DYSFUNCTION

Turner-Warwich reported that patients with PBND had confirmed of symptoms for years before diagnosis

LIFELONG PROBLEM

Donhoe JM. Primary bladder neck dysfunction (PBND) in children and adolescents I-II.J Urol 2005; 173: 212-16

- **Pelvic floor EMG LAG-TIME → interval between pelvic floor relaxation on EMG and the start of flow directly correlates with opening time (UD)**
- **On α-blocker therapy a decrease in mean pelvic floor EMG lag-time from 24.47 to 6.67 sec. ($p<0,001$) → corresponded with improved flow parameters, while no improvements was noted in untreated patients.**

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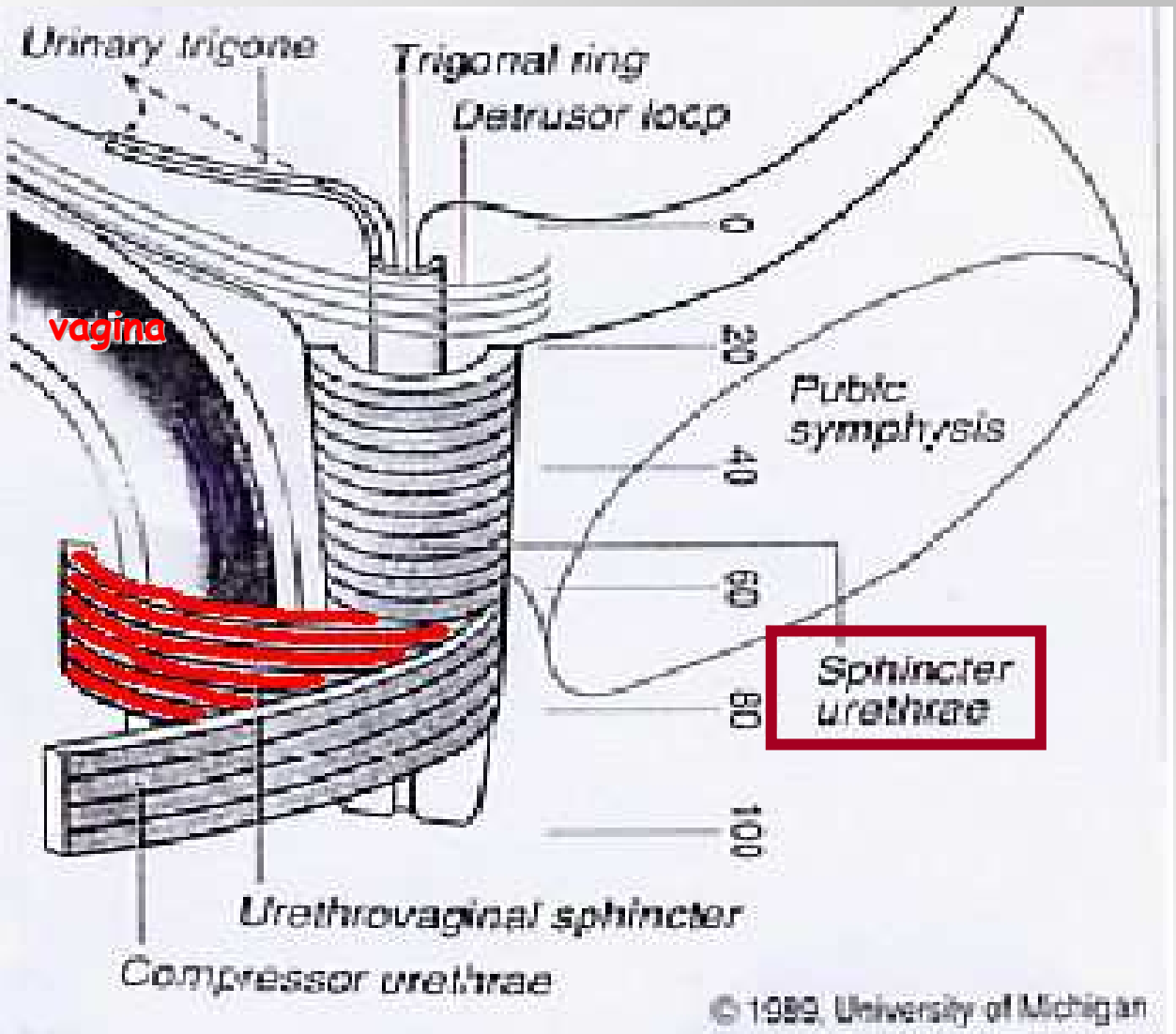

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The acquisition of volitional bladder control, particularly at night, is an important and well-established developmental neurological milestone.

Kuhtz-Buschbeck et al., 2005

Persistent bedwetting has been associated with delayed achievement of language and motor milestones in otherwise healthy children.
Functional neuroimaging studies have implicated a complex neural network involving, among other regions, frontal, insular and cingulate cortices in volitional bladder control.

Blok et al., 1997, 1998; Nour et al., 2000; Athwal et al., 2001

Neuropathology, neuroimaging and neuropsychological studies have consistently implicated the frontal lobes in the pathogenesis of SCZ

Weinberger et al., 2001

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doi:10.1093/brain/awn167 *Brain* (2008), **131**, 2489–2498

Enuresis as a premorbid developmental marker of schizophrenia*

Thomas M. Hyde,[1] Amy Deep-Soboslay,[1] Bianca Iglesias,[1] Joseph H. Callicott,[1] James M. Gold,[2] Andreas Meyer-Lindenberg,[3,†] Robyn A. Honea,[1] Llewellyn B. Bigelow,[1] Michael F. Egan,[1,‡] Esther M. Emsellem[1] and Daniel R. Weinberger[3]

We investigated whether a history of childhood enuresis, a well-established marker of neurodevelopmental delay, is associated with SCZ and with measures of brain abnormalities also associated with SCZ.

The high frequency of childhood enuresis associated with SCZ and abnormalities in prefrontal function and structure in patients with a childhood history of enuresis suggest that childhood enuresis may be a premorbid marker for neurodevelopmental abnormalities related to SCZ. These findings add to the evidence implicating prefrontal dysmaturation in this disorder, potentially related to genetic risk factors.

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The NEW ENGLAND JOURNAL of MEDICINE

Cortical Arousal in Children with Severe Enuresis

N ENGL J MED 358;22 WWW.NEJM.ORG MAY 29, 2008

BLADDER – BRAIN DIALOGUE

Table 1. Sleep Architecture and the Cortical Arousal Index in Children with Enuresis and Normal Controls.*

Variable	Patients with Nocturnal Enuresis (N=35)	Normal Controls (N=21)	P Value
Mean age (yr)	9.5	10.3	NS
Sleep stage (%)			
1	9	5	<0.01
2	48	45	NS
Light (stages 1 and 2)	57	50	<0.01
3	6	7	NS
4	20	23	<0.05
Deep (stages 3 and 4)	26	30	<0.05
Rapid eye movement	16	20	<0.01
Cortical arousal index†	6.32	3.90	<0.01

* NS denotes not significant.
† The cortical arousal index ranges from 1.12 to 12.48, with a higher score indicating more frequent cortical arousals.

More light sleep associated with frequent cortical arousals

BUT

INABILITY TO AWAKEN COMPLETELY

The transition from light sleep to complete awakening, as elicited by the arousal center, MAY BE PARADOXICALLY SUPPRESSED BY LONG-TERM OVERSTIMULATION BY SIGNALS FROM THE BLADDER.

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0022-5347/04/1726-2570/0
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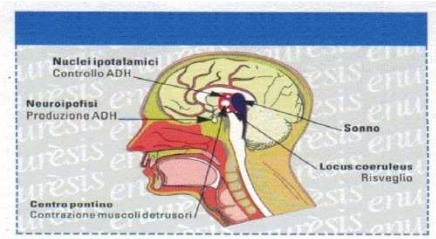
Vol. 172, 2570–2573, December 2004
Printed in U.S.A.
DOI: 10.1097/01.ju.0000144142.26242.f3

CORTICOTROPIN RELEASING FACTOR: A MEDIATOR OF EMOTIONAL INFLUENCES ON BLADDER FUNCTION

ADAM P. KLAUSNER AND WILLIAM D. STEERS*
From the Department of Urology, University of Virginia Health System, Charlottesville, Virginia

- **synthesized in neurons of PVN = key mediator anxiety–hypothalamic–pituitary–adrenal (HPA) axis**
- **expressed in areas of CNS that control voiding (Locus Coeruleus – Barrington's nucleus) during anxiety – depression – pain – functional disorders of pelvic viscera**
- **bladder activity**
- **the expression may be influenced by estradiol**



… HPA dysregulation occurs primarly with urge incontinence and does not appear to be involved with stress urinary incontinence …

Klausner AP, J Urol 2004; 172: 2570-73

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July 2006

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AUMENTATA FREQUENZA MINZIONALE	≥ 8 minzioni/die
VESCICA IPERATTIVA (URGENZA)	condizione che riguarda pazienti che soffrono di urgenza. Sostituisce termine “instabilità vescicale”
MANOVRE SOSTEGNO PIANO PERINEALE	manovre attivate per rimandare la minzione o contrastare l’urgenza (saltelli su punta dei piedi, incrocio forzato gambe, accovacciamento spesso con calcagno premuto su perineo)
INCONTINENZA DA URGENZA	incontinenza in pazienti che avvertono urgenza. E’ sinonimo di incontinenza nei bambini con vescica iperattiva
GOCCIOLIO POST-MINZIONALE	perdita involontaria di gocce di urina dopo che la minzione è terminata. LI’incontinenza da reflusso vaginale si presenta analogamente (>5aa.)
MINZIONE DIFFERITA	incontinenza in presenza di abituali manovre di sostegno piano perinenale
DIMINUITA FREQUENZA MINZIONALE	≤ 3 minzioni/die
VESCICA IPOATTIVA (PIGRA)	riguarda pazienti con bassa frequenza minzionale.Necessità di usare il torchio addominale per svuotare la vescica. Sostituisce il termine “vescica pigra”
MINZIONE FORZATA	minzione iniziata o mantenuta utilizzando torchio addominale
MITTO ESITANTE	difficoltà ad iniziare minzione o lunga attesa prima di iniziare minzione (>5aa.)
MITTO DEBOLE	mitto emesso con poca forza
MITTO INTERMITTENTE	mitto emesso a scatti subentranti
SENSAZIONE SVUOTAMENTO INCOMPLETO	sintomo non rilevante prima dell’adolescenza

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INCONTINENZA CONTINUA	perdita continua di urina in maniera consistente. Indica una malformazione o danno iatrogeno
INCONTINENZA INTERMITTENTE	perdita di urina in episodi tra di loro distinti durante il giorno, la notte o in entrambe
INCONTINENZA NOTTURNA	sinonimo di enuresi
ENURESI MONOSINTOMATICA	enuresi presente in un bambino che non presenta nessun altro sintomo di disfunzione vescicale
ENURESI NON-MONOSINTOMATICA	enuresi in un bambino che presenta anche sintomi di disfunzione vescicale come incontinenza urinaria diurna, urgenza, manovre di sostegno del piano perineale
ENURESI PRIMARIA	enuresi in un bambino che non è mai stato asciutto per almeno di 6 mesi
ENURESI SECONDARIA	enuresi in un bambino è stato precedentemente asciutto per almeno 6 mesi
NICTURIA	risveglio notturno per urinare (>5aa.)

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CARTA FREQUENZA-VOLUME	strumento raccolta dati su funzione vescica compilato dai genitori o dal bambino. Non include tutti i dati richiesti dal diario minzionale
DIARIO MINZIONALE	strumento di raccolta dati compilato dalla famiglia o dal bambino. Usato per valutare la funzione vescicale. Dati minimi richiesti: ▪ volumi vuotati ▪ frequenza minzioni ▪ introito di liquidi ▪ nicturia ▪ episodi di incontinenza ed enuresi  Diario minzionale COGNOME NOME ETÀ DATA
VOLUME VUOTATO	volume diurno emesso durante la minzione documentato nel diario minzionale. Sostituisce termine “capacità vescicale”
MASSIMO VOLUME VUOTATO	maggiore volume emesso con la minzione desumibile dal diario minzionale. Sostituisce il termine “capacità funzionale vescicale”
CAPACITA’ VESCICALE ATTESA	massimo volume vuotato correlato all’età calcolato [30+(età x 30)] ml. Max 12 aa = 390 ml; <65% inadeguato; >150% eccessivo
POLIURIA	emissione > 2 L di urina per m^2 superficie corporea/ 24h
POLIURIA NOTTURNA	volume urine notturne > 130% capacità vescicale attesa per l’età.
RESIDUO URINARIO	> a 5-20 ml indica svuotamento vescicale incompleto

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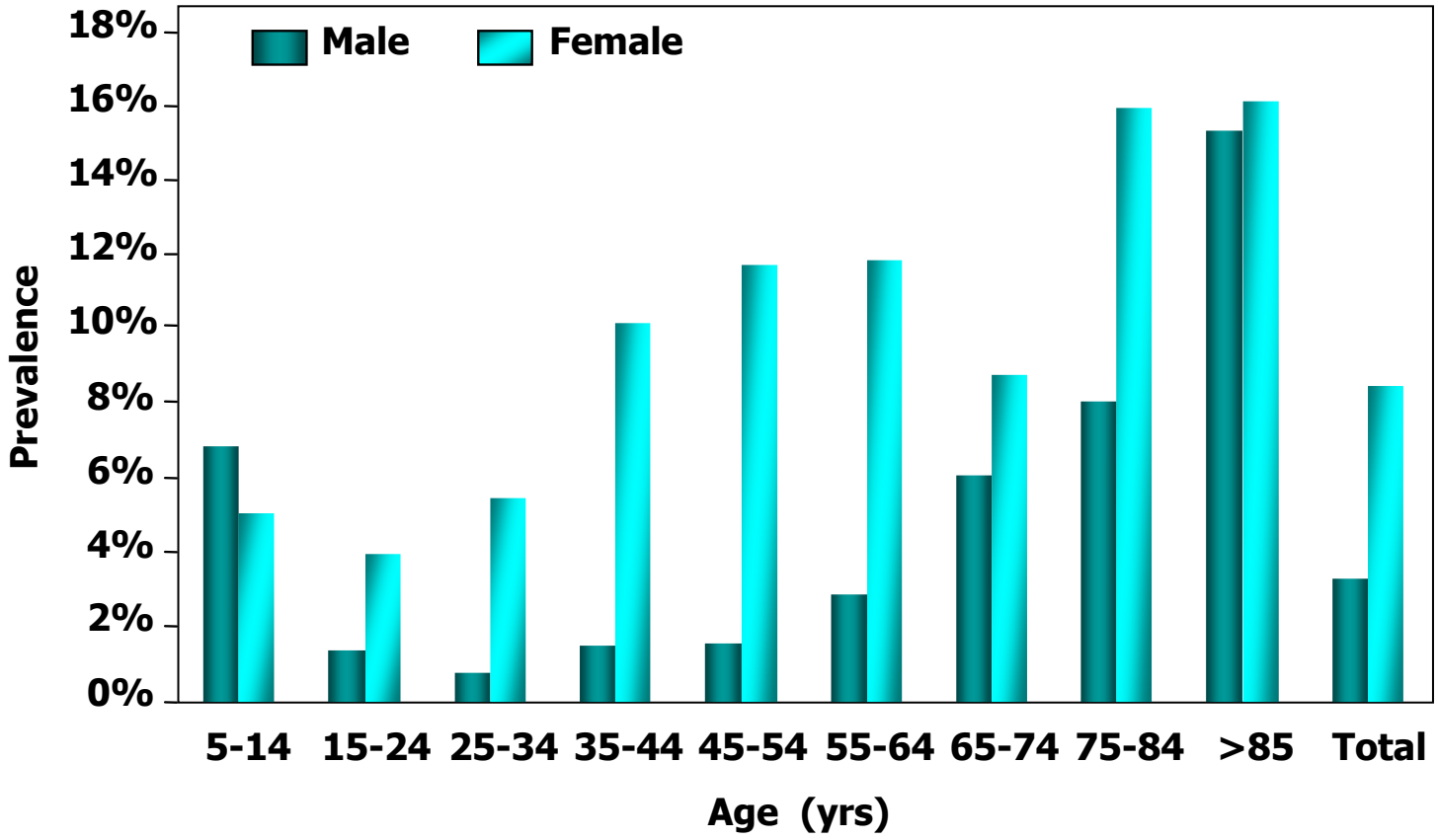
STIPSI *ritardo o difficoltà nella defecazione presente per 2 o più settimane e sufficiente a causare disagio al paziente"* **Soc. Nord Am. Gastr. Nutr. Ped.**	**oltre alla bassa frequenza devono coesistere segni e sintomi aggiuntivi come:** ▪ **defecazione dolorosa** ▪ **masse addominali palpabili** ▪ **presenza di fecalomi durante l'esplorazione rettale** ▪ **dolore addominale** ▪ **reperti patognomici ecografici come diametro rettale aumentato e una impronta retrovescicale.**
ENCOPRESI	**passaggio di feci in un luogo inappropriato sia volontariamente che involontariamente in un bambino ≥ 4 anni, dopo che ogni tipo di causa organica sia stata esclusa. La frequenza deve essere di almeno 1 volta al mese per una durata di 6 mesi (ICD-10) o di 3 mesi (DMS-IV).**

EPIDEMIOLOGY OF URINARY INCONTINENCE



Thomas TM, et al. *Br Med J.* 1980

DES Disfunctional Elimination Syndromes

Yarnell JW, Voyle GJ, Sweetnam PM, et al. Factors associated with urinary incontinence in women. J Epidemiol Community Health. 1982;36(1):58-63.	1982
Moore KH, Richmond DH, Parys BT. Sex distribution of adult idiopathic detrusor instability in relation to childhood bedwetting. Br J Urol. 1991;68(5):479-82.	1991
Kuh D, Cardozo L, Hardy R. Urinary incontinence in middle aged women: childhood enuresis and other lifetime risk factors in a British prospective cohort. J Epidemiol Community Health. 1999;53(8):453-8.	1999
Gurbuz A, Karateke A, Kabaca C. Enuresis in childhood, and urinary and fecal incontinence in adult life: do they share a common cause? BJU Int. 2005;95(7):1058-62.	2005
Fitzgerald MP, Thom DH, Wassel-Fyr C, et al. Reproductive Risks for Incontinence Study at Kaiser Research Group. Childhood urinary symptoms predict adult overactive bladder symptoms. J Urol. 2006;175(3 Pt 1):989-93.	2006
Bower WF, Sit FK, Yeung CK. Nocturnal enuresis in adolescents and adults is associated with childhood elimination symptoms. J Urol. 2006;176(4 Pt 2):1771	2006

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J Epidemiol Community Health 1999;53:453–458 453

Urinary incontinence in middle aged women: childhood enuresis and other lifetime risk factors in a British prospective cohort

Diana Kuh, Linda Cardozo, Rebecca Hardy

- **Objective: to investigate the prevalence and lifetime risk factors for UI in middle aged women**
- **Design: prospective cohort study**
- **Participants: 1333 women aged 48 yrs**
- **Results: 50% reported SUI and 22% UUI in the previous year**
  - ***Women who at age 6 yrs had wet in the day or several nights a week were more likely to suffer severe incontinence and report urge symptoms***
  - **Occasional bedwetting was not associated with an increased risk in adult life**

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Effect of Childhood Dysfunctional Voiding on Urinary Incontinence in Adult Women

Vatche A. Minassian, MD, Danny Lovatsis, MD, Dante Pascali, MD, May Alarab, MD, and Harold P. Drutz, MD

VOL. 107, NO. 6, JUNE 2006 OBSTETRICS & GYNECOLOGY 1247

- **Objective: to evaluate the correlation between childhood dysfunctional voiding and UI in adulthood**
- **Design: case-control study including 84 women referred to a urogynae outpatient clinic and 86 controls**
- **Results: Higher prevalence of a history of childhood dysfunctional voiding in women with current**
  - **frequency (OR 2.48, P = 0.004)**
  - **urgency (OR 2.02, P = 0.03)**
  - **SUI (OR 2.21, P = 0.01)**
  - **and UUI (OR 2.48, P = 0.009)**

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J Urol. 2006 March ; 175(3 Pt 1): 989–993.

Childhood Urinary Symptoms Predict Adult Overactive Bladder Symptoms

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David H. Thom
Department of Family and Community Medicine, University of California, San Francisco

Christina Wassel-Fyr and **Leslee Subak**[‡]
Departments of Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco

Linda Brubaker[§]
From the Departments of Obstetrics/Gynecology and Urology, Loyola University Medical Center, Maywood, Illinois

Stephen K. Van Den Eeden
Kaiser Permanente Division of Research, Oakland, California

Jeanette S. Brown[‖]
Departments of Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco

- **Objective: to evaluate the relationship between childhood and adult urinary symptoms in middle aged women**
- **Design: a population based cohort randomly selected from age and race strata**

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VOIDING DYSFUNCTION

N. 2109 ♀

56 ± 9 yrs

Childhood urinary symptoms as risk factors for adult lower urinary tract symptoms

	Adult Urinary Symptoms					
	Daytime Void Frequency†	Nocturia‡	Urgency§	Stress UI Weekly or More	Urge UI Weekly or More	More Than 1 UTI in last 12 Mos
*Childhood Urinary Symptoms**						
Daytime frequency:						
Adjusted OR‖	1.30	1.36	1.88¶	0.97	0.76	1.08
95% CI	0.91–1.86	0.96–1.92	1.32–2.69	0.59–1.58	0.41–1.41	0.68–1.71
Nocturia:						
Adjusted OR‖	1.63*	2.27¶	1.14	1.26	0.69	1.48
95% CI	1.05–2.54	1.47–3.5	0.71–1.83	0.66–2.41	0.19–1.44	0.85–2.57
Daytime UI:						
Adjusted OR‖	0.82	0.50**	0.96	1.60	2.56**	0.87
95% CI	0.46–1.47	0.27–0.93	0.55–1.68	0.72–5.59	1.11–5.9	0.41–1.85
Nocturnal enuresis:						
Adjusted OR‖	1.09	0.67	0.94	0.57	2.68††	0.65
95% CI	0.66–1.79	0.41–1.10	0.58–1.53	0.25–1.34	1.32–5.46	0.33–1.29
UTIs (1 more than yr):						
Adjusted OR‖	1.19	1.59	1.47	2.00**	2.03	2.80¶
95% CI	0.70–2.05	0.95–2.66	0.86–2.52	1.00–3.90	0.93–4.46	1.60–4.90

¶ $p < 0.001$.
** $p < 0.05$.
†† $p < 0.01$.

Fitzgerald MP, et al. J Urol. 2006;175(3 Pt 1):989-93

VOIDING DYSFUNCTION

Childhood symptoms of daytime urinary frequency, nocturia, urinary incontinence, nocturnal enuresis as well as urinary tract infections are **strongly associated** with **OAB symptoms so prevalent** in American middle-aged and older women.

Early identification of population at risk for adult OAB symptoms.

Prevention or **early intervention** may be possible, reducing the significant burden of adult OAB.

Fitzgerald MP, et al. J Urol. 2006;175(3 Pt 1):989-93

VOIDING DYSFUNCTION

Prior studies have identified an association between childhood urinary tract disorders and subsequent adult lower urinary tract symptoms in women.

Childhood nocturnal enuresis has been commonly reported by women with detrusor instability

Moore K. H., et al. Br Urol, 68: 479, 1991

… associated with later adult urinary symptoms of urinary frequency, nocturia and urge incontinence

Kuh D., et al. J Epidemiol Community Health, 53: 453, 1999; Foldspang A. Mommsen S. J Urol, 152: 85, 1994; Yarnell J., et al. J Epidemiol Community Health, 36: 58, 1982

VOIDING DYSFUNCTION

A history of recurrent UTIs is well established as a risk factor for future health problems

- **hypertension**

  Jacobson S., et al. BMJ, 299: 703, 1989

- **impaired renal function**

  Smellie JM, et al. Pediatr Nephrol, 12: 727, 1998]

- **renal related pregnancy complications**

  Martinelli J., et al. Pediatr Nephrol, 9: 131, 1995

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DYSFUNCTIONAL ELIMINATION SYMPTOMS IN CHILDHOOD AND ADULTHOOD

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- **Objective: to evaluate the natural history of DES to identify aspects that may be carried out into adulthood**
- **Participants: 191 women referred to a urogynae outpatient clinic and 251 controls**
- **Results: UG pts (41.7%) significantly higher childhood DES scores than controls**
  - **Higher DES scores correlated significantly with current adult urgency, UUI, SUI, Incomplete emptying, nocturia, nocturnal enuresis, hesitancy,**
  - **Constipation and faecal incontinence in adulthood was significantly associated with high DES scores**
  - **Logisitc regression revealed childhood urgency associated with adult DES.**

COMORBILITA' FUTURE NELLE BAMBINE CON DISTURBI MINZIONALI ED EVACUATIVI

Nocturnal Enuresis in Adolescents and Adults is Associated With Childhood Elimination Symptoms

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- **Objective**: to evaluate the prevalence of childhood bladder and bowel dysfunction in adolescents and adults with nocturnal enuresis
- **Participants**: 56 adolescents/adults referred to nocturnal enuresis clinic and 293 controls
- **Results**: Significant childhood bladder and bowel symptoms along with more adult urge and bowel dysfunction were found in adults and adolescents with nocturnal enuresis.

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Enuresis in childhood, and urinary and fecal incontinence in adult life: do they share a common cause?

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Accepted for publication 16 December 2004

- **Objective: to investigate any association between urinary or fecal incontinence and childhood bedwetting**
- **Participants: 1021 women referred to a gynaecology outpatient clinic**
- **Results:**
  - **history of childhood bedwetting in 29.6% and 21.1% of women with and without UI respectively ($P < 0.05$)**
  - **Women with SUI had significantly higher rates of enuresis in childhood (35.4%) than those without it (21.1%; $P = 0.003$)**
  - **Fecal incontinence was significantly more common in women with a history of bedwetting in childhood ($P < 0.05$)**

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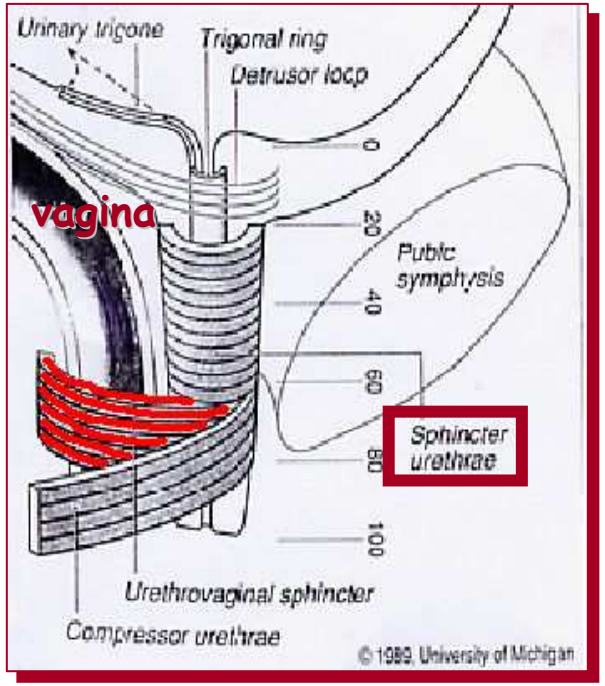
Chiozza ML, Graziottin A. Urge incontinence and female sexual dysfunction: a life span perspective. Urodinamica; 2004 14 (2): 133-138

Unfortunately, a persisting communication failure still separates the pediatric world from the gynecologica/urological one, puberty being a sort of invisible wall that separates the two clinical domains.



Greenstein A, et al. Childhood nocturnal enuresis in vulvar vestibulitis syndrome. J Reprod Med. 2005;50(1):49-52.

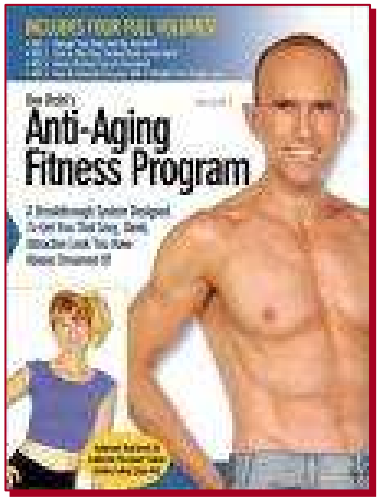
Primary Vulvar Vestibulitis Syndrome

26,6% women had a history of childhood enuresis

AGING DEFINITION

- The process of becoming older, genetically determined and *enviromentally modulated*
- Any change in an organism over time which refers to a *multidimensional process of physical, psychological, and social change*
- Complex evolutionary spectrum of innate and progressive processes affecting molecules, cells and the whole organism that is caused by free radicals, non-enzymatic glycosylation, and apoptosis[1,2], plausibly under the control of the endocrine system particularly GH, estrogens and androgens[2,3]

1. *Russell B et.al.Int Urogynecol J 1996.*
2. *Lelbach A et al Orv Hetil 2006*
3. *Markou A Hormones 2005*



COMORBILITA' FUTURE NELLE BAMBINE CON DISTURBI MINZIONALI ED EVACUATIVI

TAKE HOME MESSAGGES

1. I sintomi legati alle disfunzioni delle basse vie urinarie in età pediatrica sono:
   - epidemiologicamente rilevanti
   - significativamente associati alla presenza di sintomi di iperattività vescicale nella vita adulta e a disturbi evacuativi come la stipsi.

2. il documentato maggior rischio di sviluppare incontinenza da stress nelle donne con enuresi notturna in età pediatrica può fornire l'opportunità di evitare alle stesse l'esposizione a fattori di rischio come : travaglio prolungato, applicazione di forcipe o vacuum, parto vaginale e parto di neonato di peso<4Kg.

3. Un approccio "life-span" alle disfunzioni minzionali pediatriche non è più dilazionabile considerato l'impatto negativo di questi sintomi sull'attività vescicale, intestinale e sessuale futura di questi/e bambini/e.