INCONTINENZA URINARIA MASCHILE

Dr. TOMMASO CORVASCE

UROLOGIA UNIVERSITARIA E CENTRO TRAPIANTI DI RENE

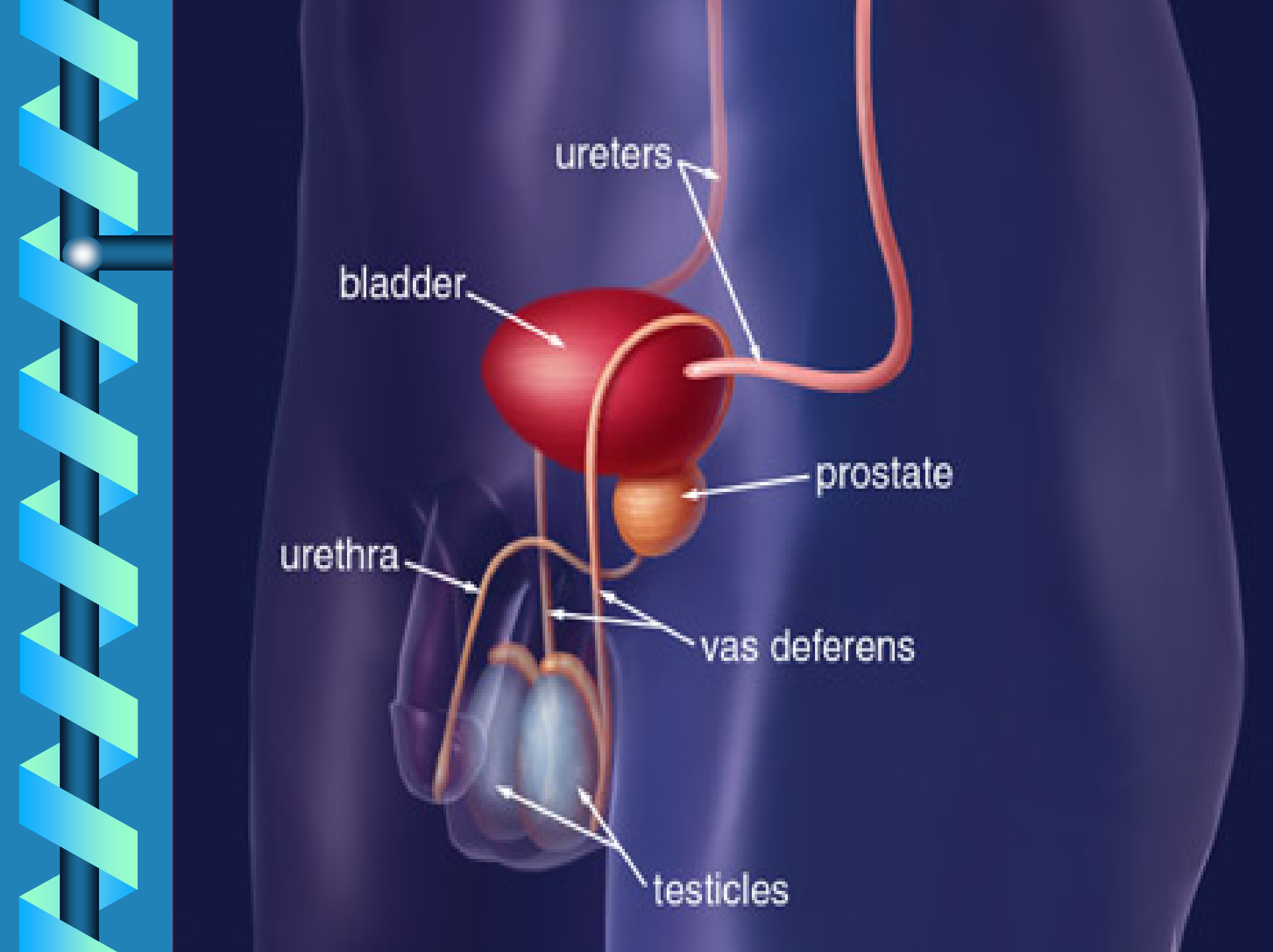
INTERNATIONAL CONTINENCE SOCIETY

Incontinenza urinaria

"Presenza di ogni perdita involontaria di urina"

Classificazione dell'incontinenza urinaria

- Incontinenza urinaria da sforzo
- Incontinenza urinaria da urgenza
- Incontinenza urinaria mista
- Ischiuria paradossa
- Enuresi *

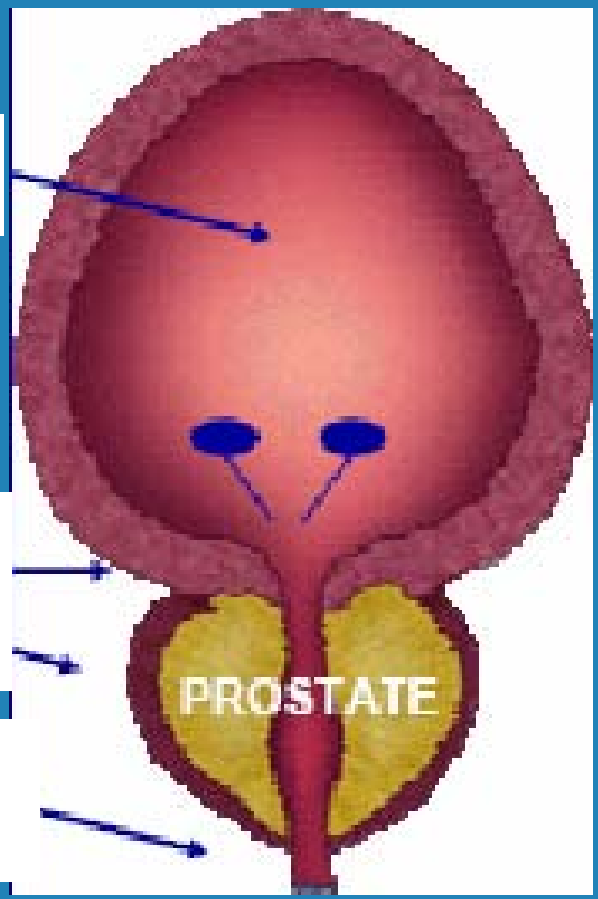

ureters
bladder
prostate
urethra
vas deferens
testicles

La Vescica e gli Sfinteri

vescica

Sfintere interno
(involontario)

Sfintere esterno
(volontario)



FISIOLOGIA DELLA CONTINENZA URINARIA MASCHILE

Fattori responsabili della continenza urinaria maschile

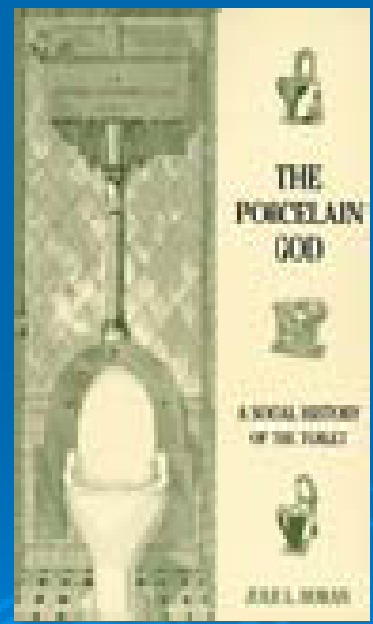
- **vescicale**
- **uretrale**

The Urinary System

- Upper Urinary Tract
  - Kidneys: Urine Production
  - Ureters: Transport urine to the bladder
- Lower Urinary Tract
  - Bladder and Urethra:
    - Urine Storage
    - Urine Voiding

Bladder Control Problems

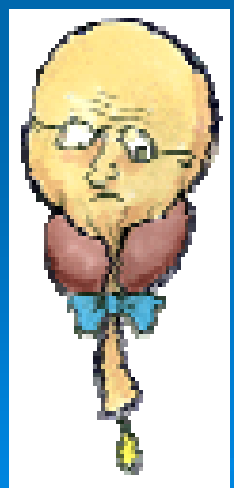
- Urinary Incontinence → "I'm Wet."
- Overactive Bladder (OAB)
  - "I feel the urge to go all the time."
  - "I go all day long."
  - "I go all night long."
- Urinary Retention
  - "I can't go when I want to."



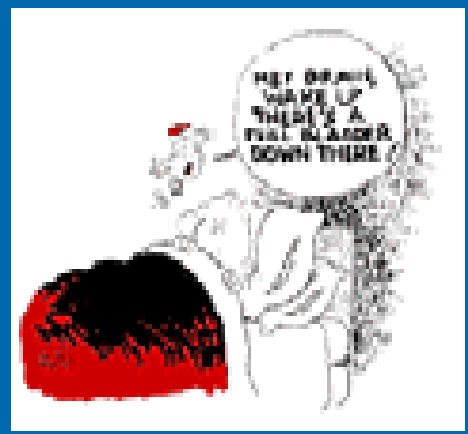
Bladder Control Problems

- Who is affected??

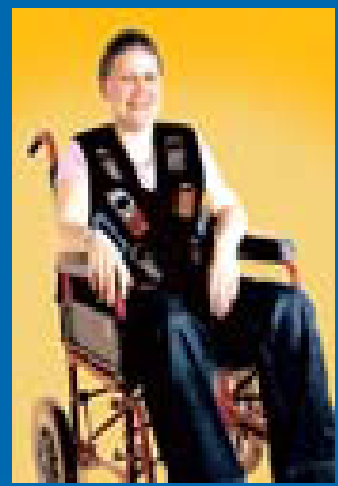
Women



Men



Children



Neurological injury

Elderly

INCONTINENZA URINARIA MASCHILE CAUSE REVERSIBILI

- Delirium; dementia
- Infections: urinary,respiratory, skin
- urethritis; alcohol ingestion; acute illness
- Pharmacological agents : diuretics, sedative/hypnotics anti-cholinergics, calcium channel blockers antidepressants,EtC

INCONTINENZA URINARIA MASCHILE CAUSE REVERSIBILI

- Psychological causes: depression
- Endocrine disorders: Hyperglycemia ;excess urine output; excess fluid intake
- Restricted mobility: physical restraints, musculo-skeletal disorders
- Stool impaction; chronic constipation

Primary Care: Clinics In Office Practice, Keilman L 2005

CLASSIFICAZIONE CLINICA DELLA INCONTINENZA URINARIA MASCHILE

- Stress
- Urge
- Overflow
- Functional
- Mixed component (detrusor hypercontractability and impaired urethral contraction)
- Neurogenic (brain-spinal cord damage)

Incontinenza urinaria

perdita involontaria di urine attraverso l'uretra

urge incontinence

iperattività del detrusore

stress incontinence

difetto del supporto pelvico

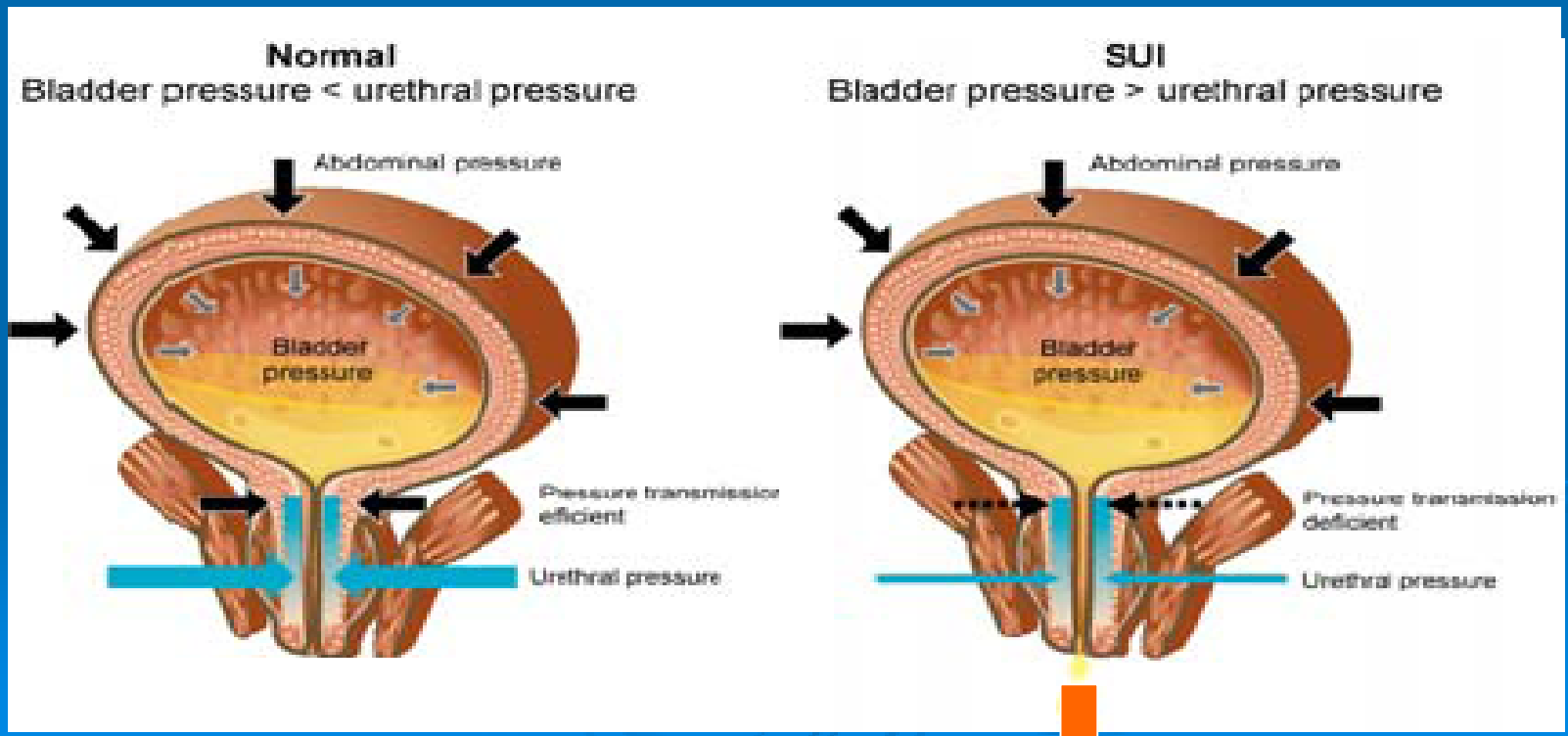
deficit intrinseco

INCONTINENZA URINARIA MASCHILE DA SFORZO

Perdita incontrollata di quantità variabili di urina per aumenti improvvisi di pressione addominale (starnuti, colpi di tosse, monovre di Valsalva, sollevamento pesi, saltelli, rapporti sessuali ecc.)

Sfintere uretrale ipoattivo

The Weak Urethra



CAUSE PIU' FREQUENTI DI IU DA STRESS NEL MASCHIO

ESITI DI PROSTATECTOMIA RADICALE (RRP)

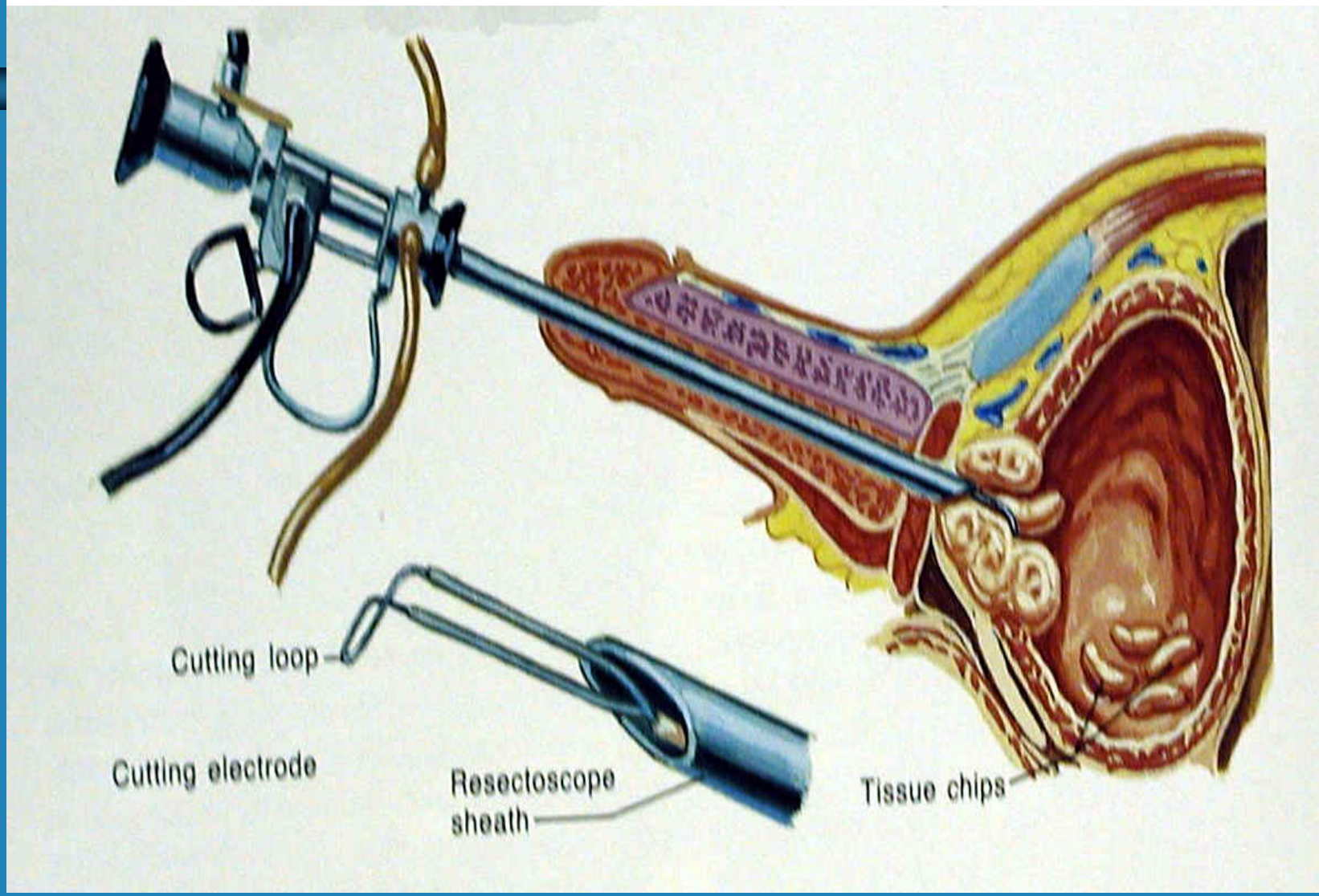
- DANNO A CARICO DEI NN CAVERNOSI LESIONE SFINTERICA
- DIRETTA/NON ADEGUATA PRESERVAZIONE APICE PROSTATICO E COLLO VESCICALE
- RESEZIONE ENDOSCOPICA DI ADENOMA DELLA PROSTATA (TURP)
- ADENOMECTOMIA TRANSVESCICALE (ATV)

LESIONE SFINTERICA DIRETTA

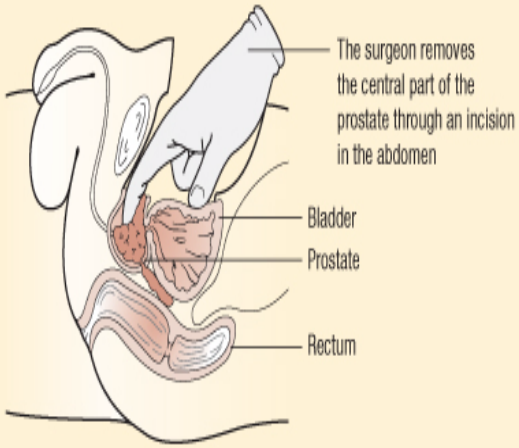
IUS MASCHILE DOPO TURP O ATV

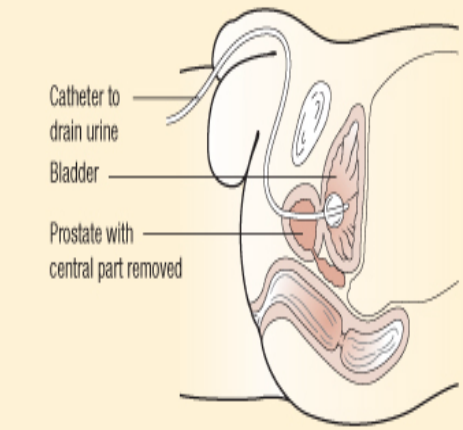
- DANNO SFINTERICO PIU' FREQUENTE DA ORE 10 A ORE 2 DOPO TURP
- LESIONE DELLO SFINTERE DISTALE DURANTE ENUCLEAZIONE DI ADENOMA PROSTATICO CON ESTENSIONE DELLA MANOVRA OLTRE IL VERU MONTANU

TURP


Cutting loop
Cutting electrode
Resectoscope sheath
Tissue chips

ADENOMECTOMIA TRANSVESCICALE





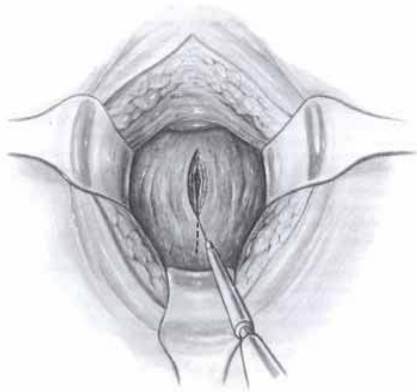
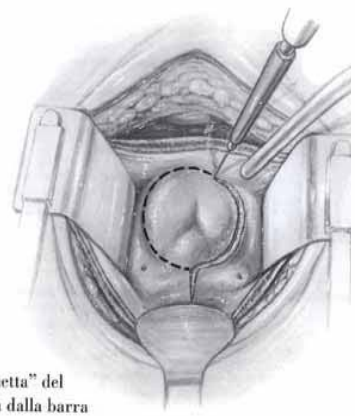


FIG. 1. Cistotomia longitudinale.



IG. 2. Incisione a "racchetta" del
ollo vescicale, a partenza dalla barra
iterureterica.

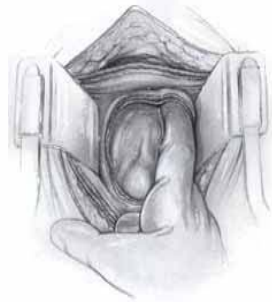


FIG. 3. Preparazione digitale del piano di clivaggio.

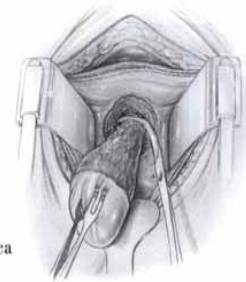


FIG. 4. Sezione dell'uretra prostatica con forbici curve.

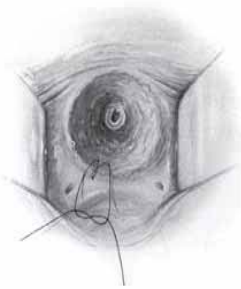
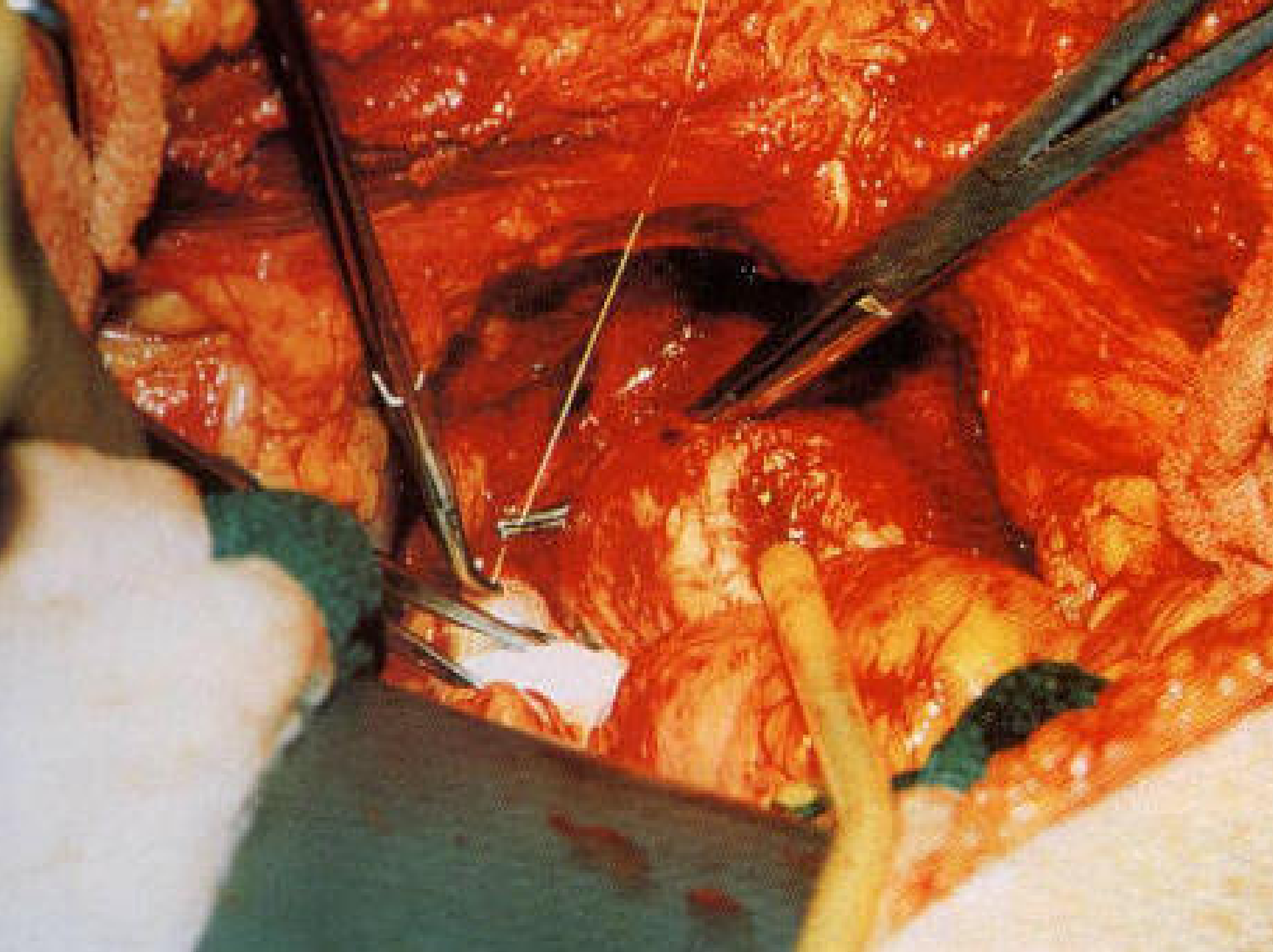


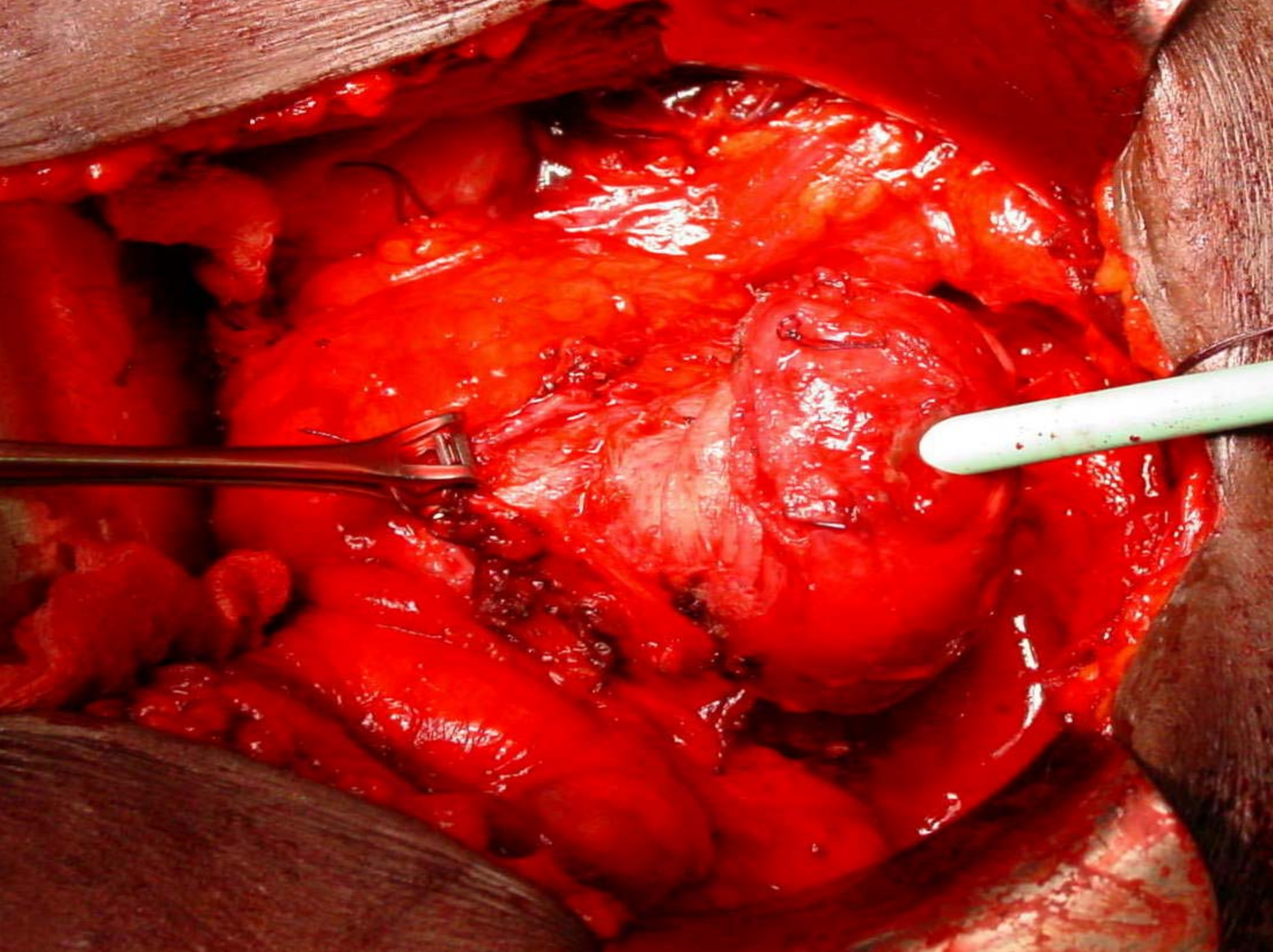
FIG. 5. Primo dei 6 punti ad "X" in catgut, a scopo emostatico, che vengono posizionati su tutto il contorno del collo.

IUS DOPO PROSTATECTOMIA RADICALE RETROPUBICA

- Non adeguata preparazione-preservazione dell'apice prostatico e del collo vescicale
- Walsh e Klein hanno dimostrato un miglioramento della continenza incorporando tessuto del complesso venoso dorsale e dell'uretra posteriore nell'anastomosi v-u (Walsh, 1990- Klein 1992)

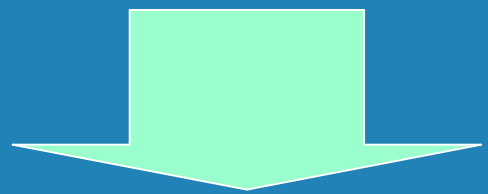
Studi di Urodinamica indicano che paz continenti dopo RRP hanno *lunghezza uretrale funzionale* maggiore rispetto ai pz incontinenti





INCONTINENZA URINARIA MASCHILE DA URGENZA

Contrazioni incontrollate del muscolo detrusore che non sono opportunamente contrastate dai sistemi sfinteriali preposti

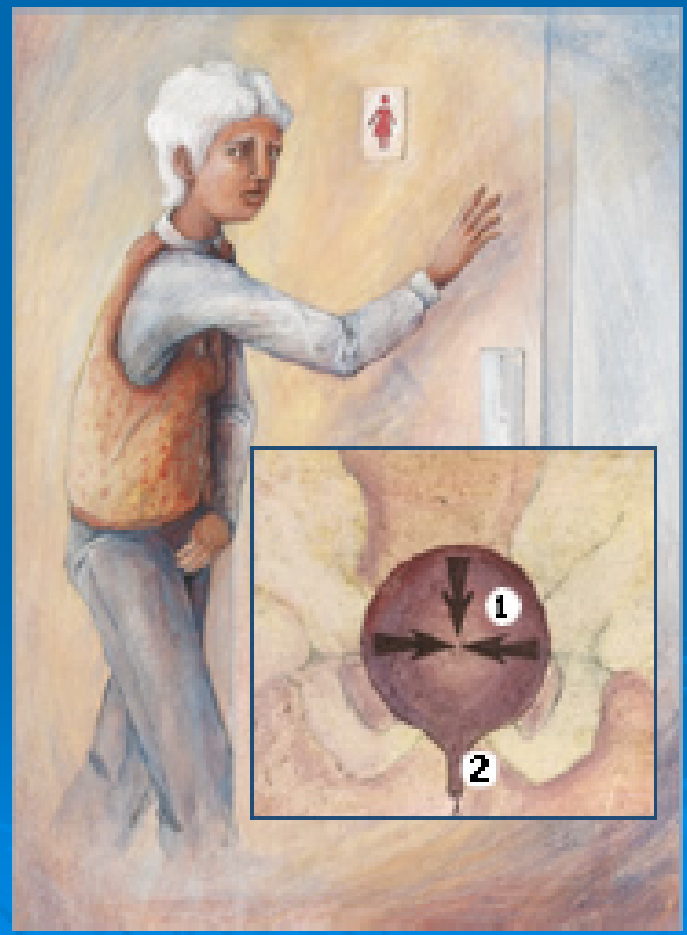


bisogno improcrastinabile di mingere con fughe di urina prima di raggiungere la toilette.

Urge Incontinence

- Urinary Leakage with a sudden, strong urge to go.

This may be a large amount of leakage!!



Incontinenza mista o “stress-urge incontinence”

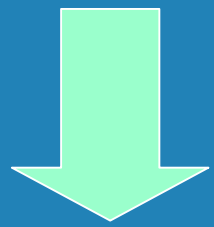
In questa forma può prevalere l’una o l’altra delle due patologie

INCONTINENZA URINARIA MASCHILE DA RIGURGITO [ISCURIA PARADOSSA]

Espressione di *ritenzione cronica di urine* dove la ridotta attivita' del detrusore, associata al notevole residuo pm, può causare frequenza, urgenza minzionale e fuga involontaria di urine, diurna e notturna

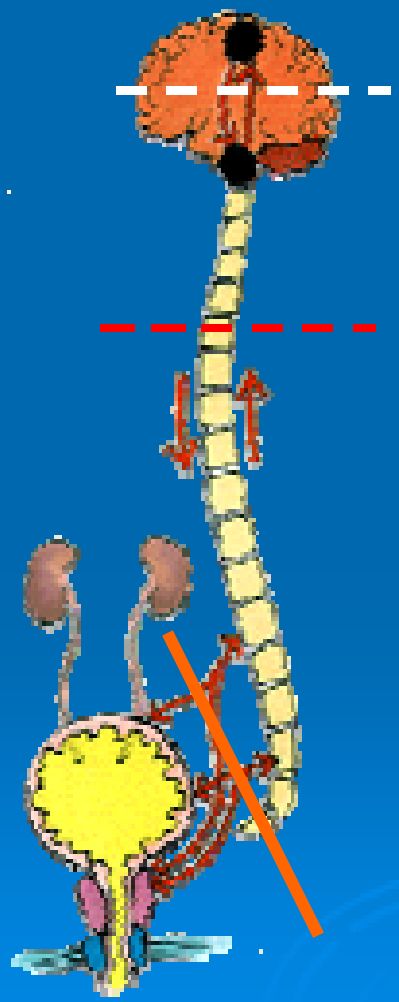
INCONTINENZA URINARIA MASCHILE DI TIPO FUNZIONALE

Disabilita' fisica o mentale



Difficolta' a raggiungere la toilette nel momento della necessita'

The Neurogenic Bladder



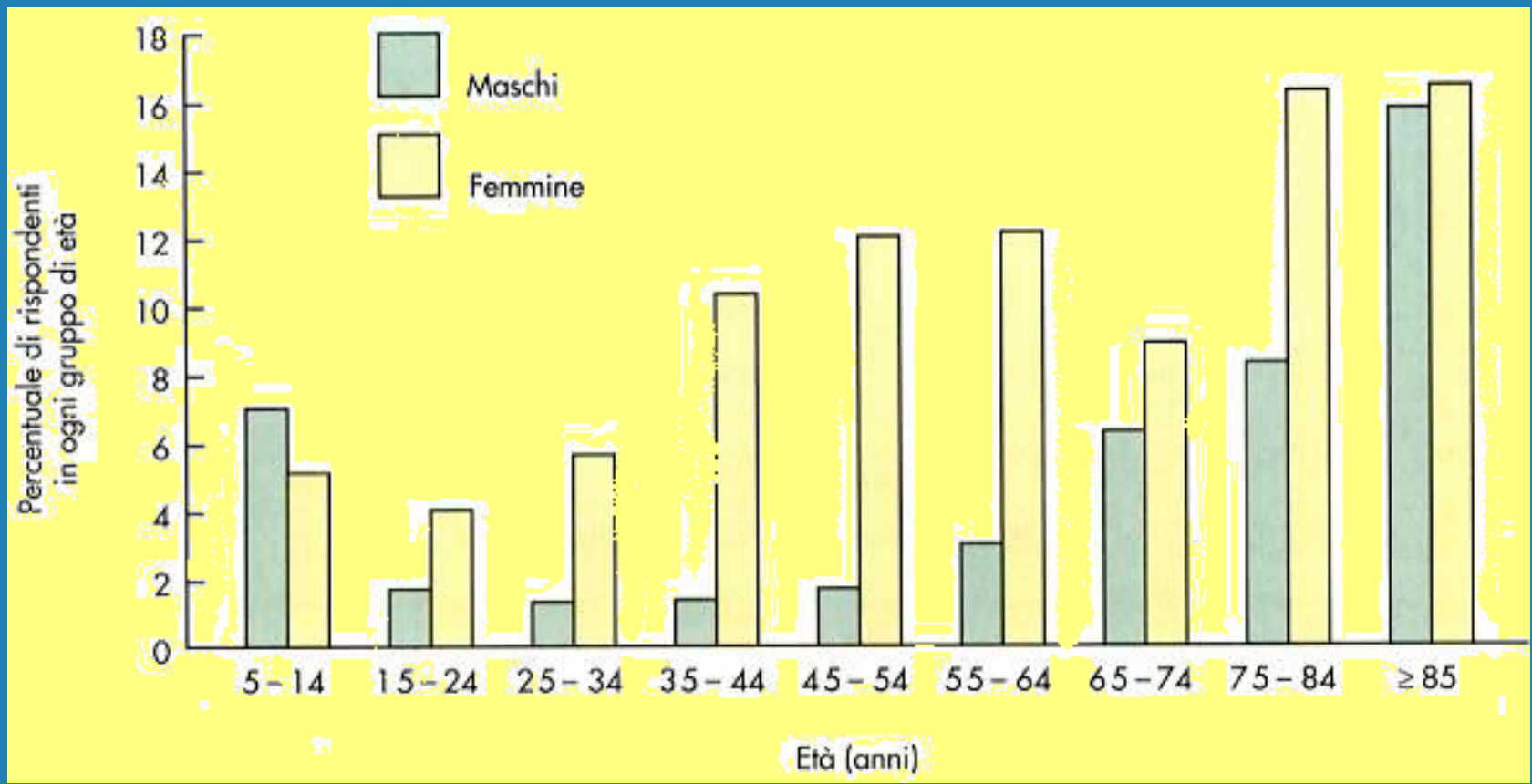
- Multiple Sclerosis
- Stroke
- Parkinson's Disease
- Spinal Cord Injury
- Colon-rectal Surgery

INCONTINENZA URINARIA MASCHILE

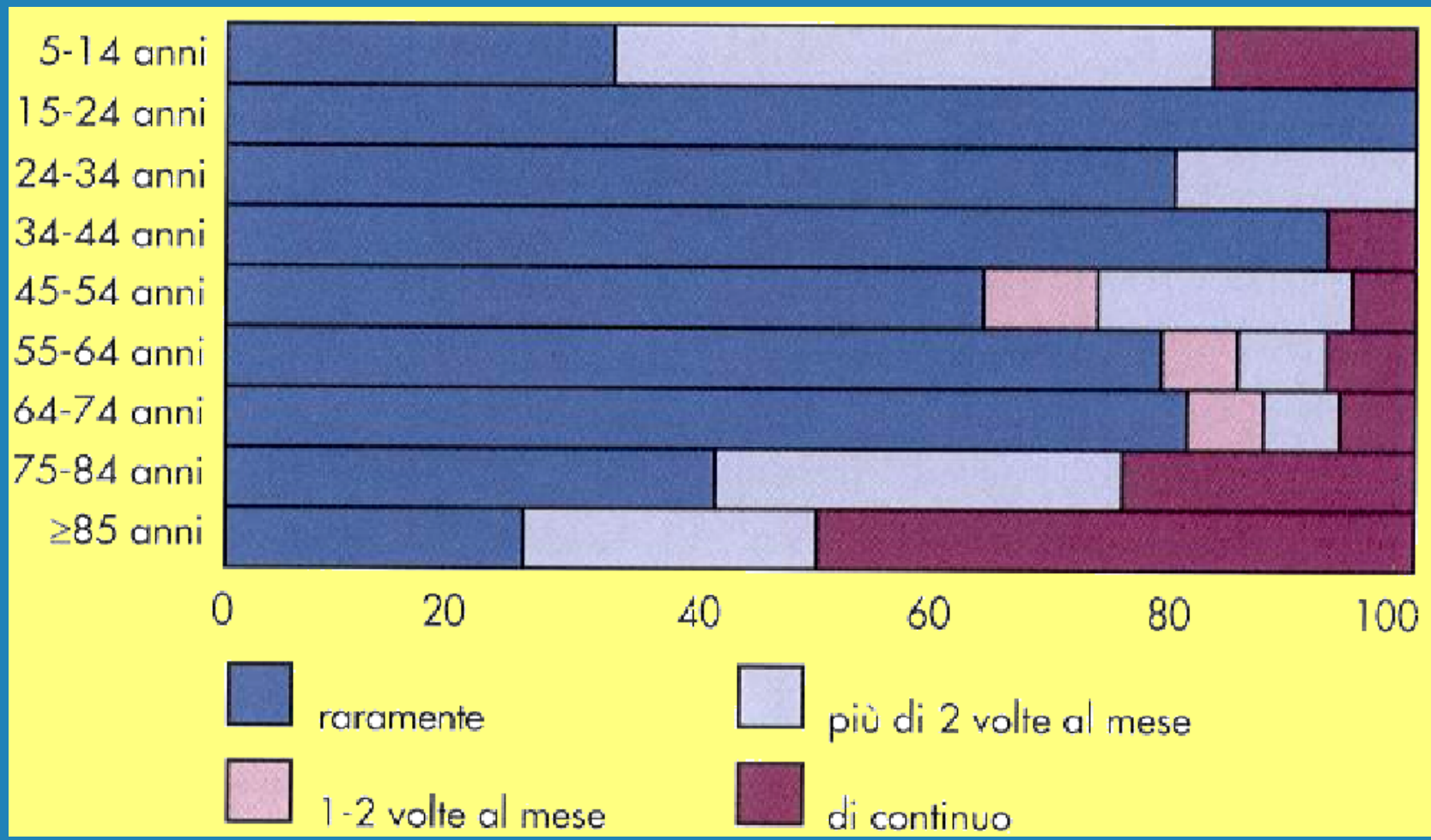
Impatto sulla qualità di vita:

- isolamento
- riduzione interazioni sociali
- necessità di protezioni speciali (es. per il letto)
- modificazioni abitudini di vita (necessità di mappare le toilettes)
- limitazione o cessazione attività fisiche
- rinuncia all'attività sessuale
- depressione
- disistima personale

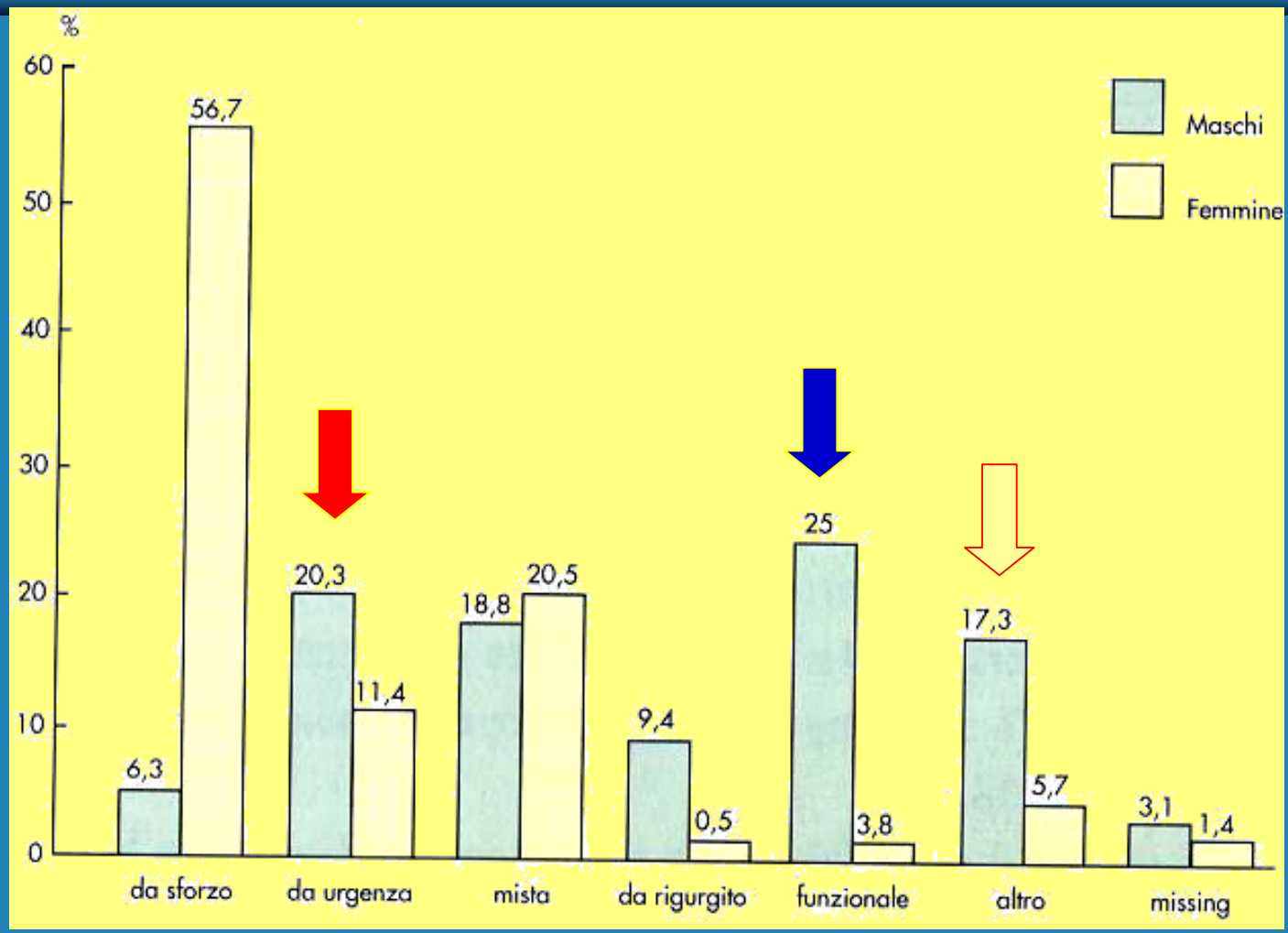
Prevalenza dell' Incontinenza Urinaria regolare
(2 o più episodi di incontinenza per mese)
nel Sesso femminile e maschile (popolazione generale)



Gravità dell'incontinenza urinaria maschile per età



Classificazione IU per Tipologia in entrambi i sessi



INCONTINENZA URINARIA MASCHILE
Test Diagnostici 1° livello

- Anamnesi
- Esame obiettivo
- Esplorazione rettale
- Esame delle urine, routine ematochimica
- PSA
- Diario minzionale

From the 5th International Consultation on BPH - Paris, June 2000

Anamnesi

- Natura e durata dei sintomi genito-urinari riferiti (caratterstiche del tipo di IU, uso di pad, frequenza degli episodi di IU)
- Precedenti interventi chirurgici
- Notizie cliniche generali, vita sessuale, somministrazione questionario ICIQ- Urinary Incontinence
- Farmaci
- Rischio relativo correlato ad eventuali interventi chirurgici e/o terapia medica

From the 5th International Consultation on BPH - Paris, June 2000

ICIQ-Urinary Incontinence

A) To assess the impact of symptoms of incontinence on **quality of life**

B) To assess **outcomes of treatment**

c) Frequency of urinary incontinence
Amount of leakage
Overall impact of urinary incontinence
Self-diagnostic item Lanuage versions available

ICIQ-Urinary Incontinence

c) Validity, reliability and responsiveness established with rigour in one data set Scoring system

D) 0-21 overall score with greater values indicating increased severity

E) Self-diagnostic item unscored Suggested modules to use in conjuction

Esame obiettivo

- Esame dell'area sovrapubica e dei genitali (esclusione di meato stenotico)

- Valutazione della funzione motoria e sensitiva dell'apparato genito-urinario (esclusione di causa neurologica)

ESPLORAZIONE TRANSRETTALE DELLA GHIANDOLA PROSTATICA

- Dimensioni, consistenza, forma ed eventuali area sospette per neoplasia della ghiandola prostatica

- Tono dello sfintere anale

- Eventuali patologie rettali

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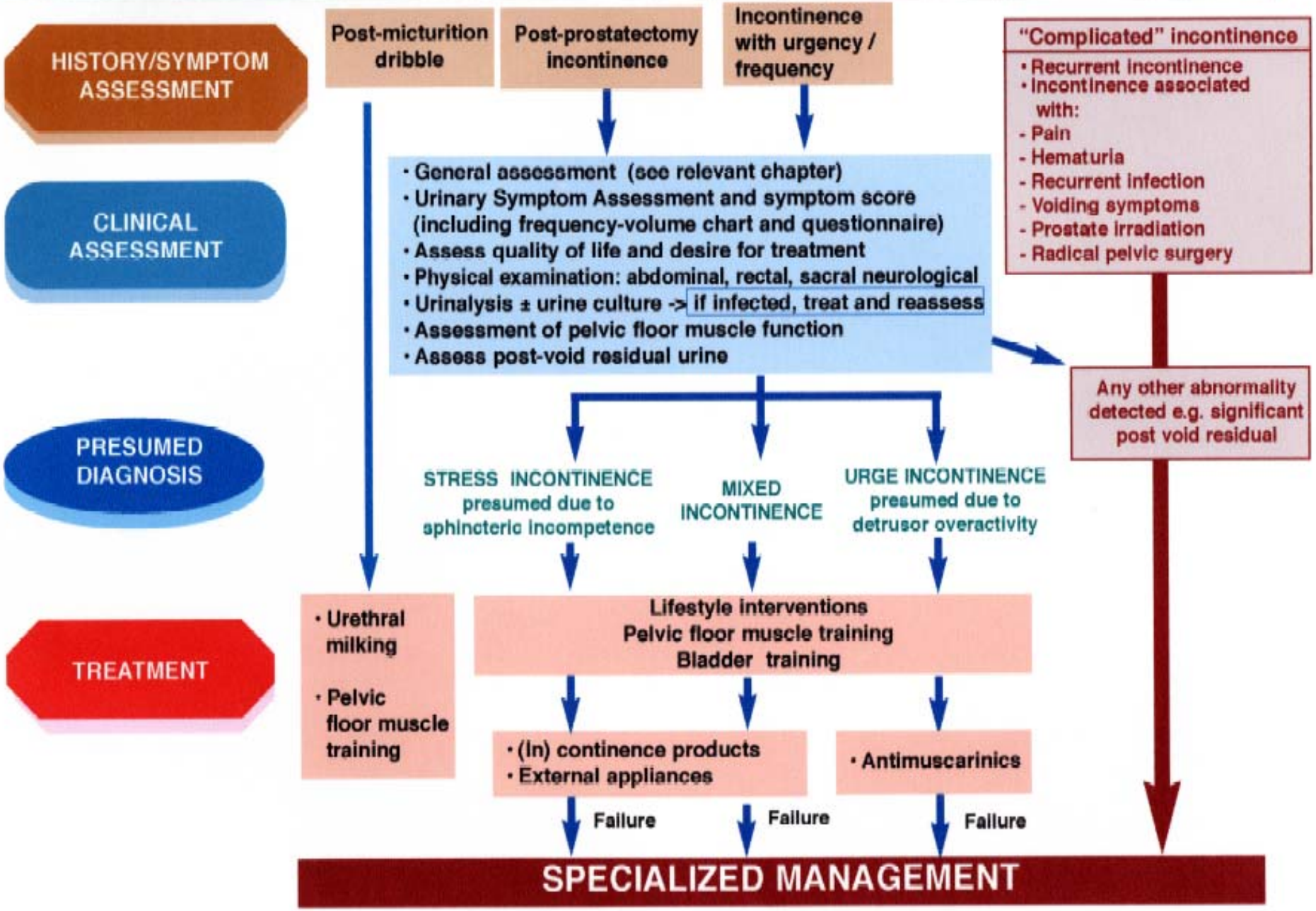
Initial Management of Urinary Incontinence in Men



INCONTINENZA URINARIA MASCHILE
Test diagnostici 2° livello

- Uroflussometria
- Residuo postminzionale
- Ecografia App.Urinario
- Rx Urografia ed ev. studio delle bvu
- Esame urodinamico
- Endoscopia delle basse vie urinarie

From the 5th International Consultation on BPH - Paris, June 2000

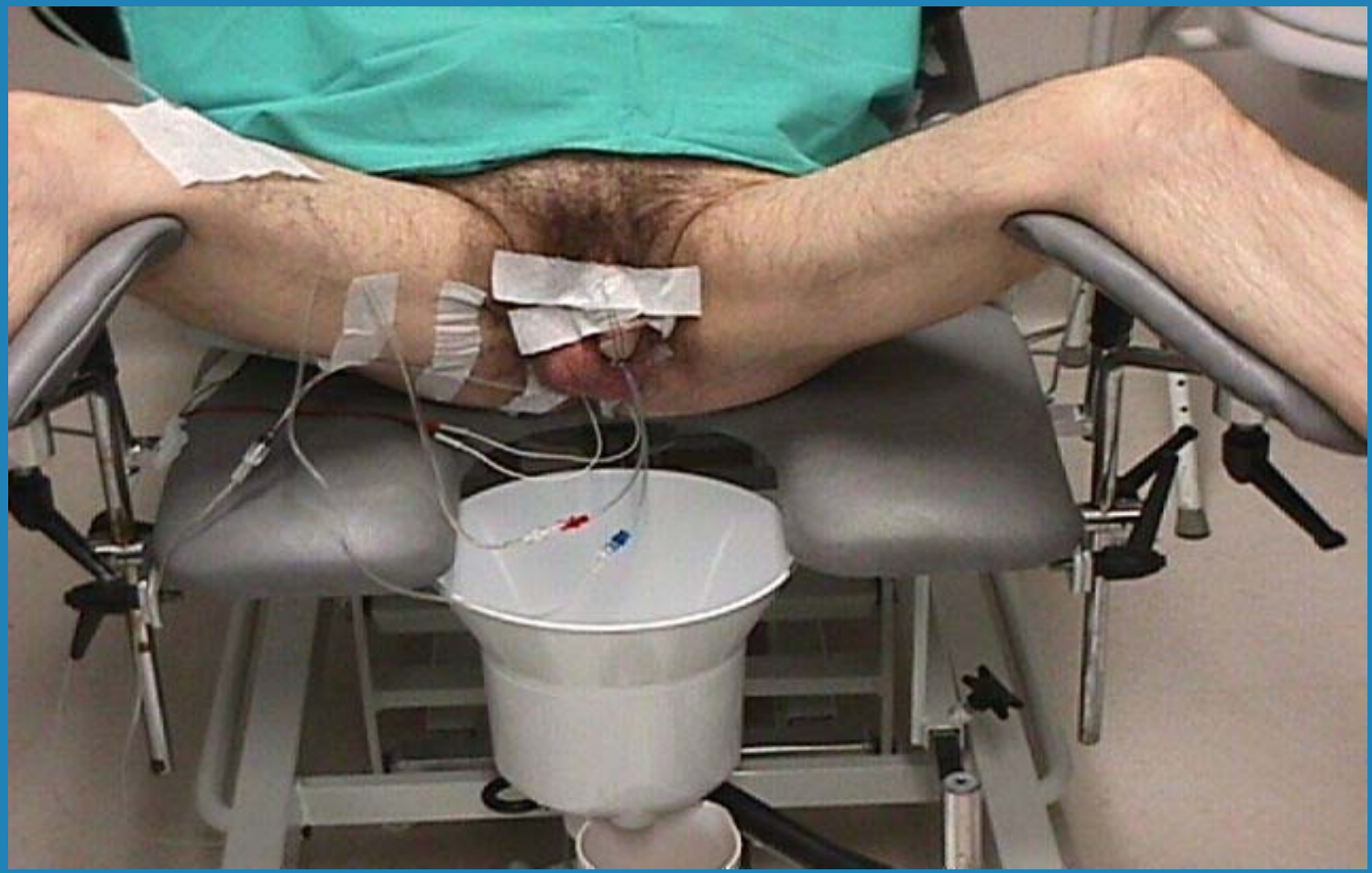
Diario minzionale

Utile quando *nicturia, urgenza-frequenza ed una severa sintomatologia ostruttiva*, associati ad incontinenza, sono sintomi importanti

Ora	Vol. urine	Urgenza	Incontinenza	Liquidi assunti

From the 5th International Consultation on BPH - Paris, June 2000

RUOLO DELL' ESAME URODINAMICO NELLA DIAGNOSI DI IU MASCHILE



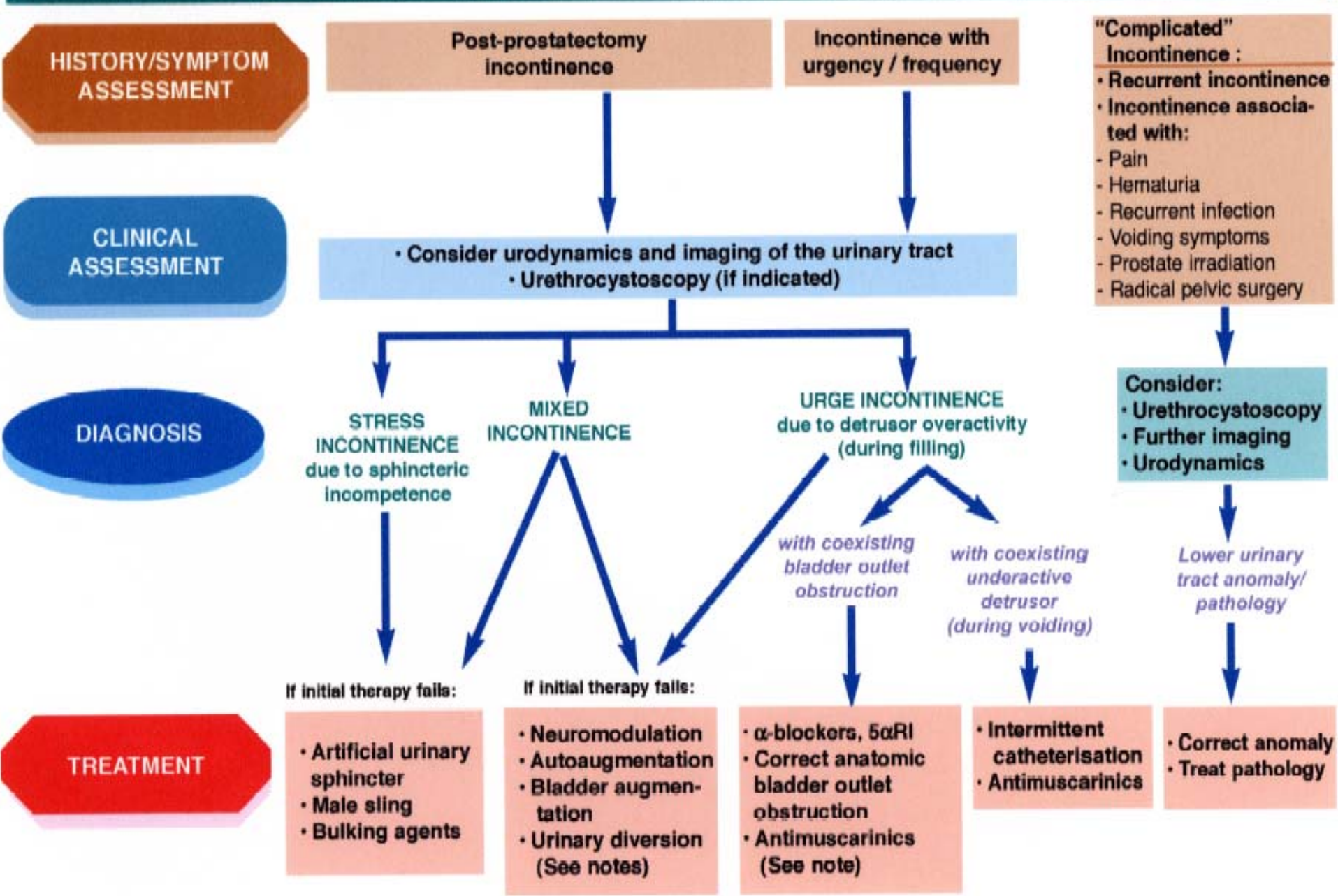
- **UROFLUSSOMETRIA:** valutazione della capacita' vescicale, del volume emesso, del RPM, del Qmax-Qave in ml/sec.

- **CISTOMANOMETRIA:** valutazione della attivita', sensibilita', capacita' e compliance del detrusore

- **STUDIO P/F:** valutazione del grado di ostruzione delle basse vie urinarie, del residuo urinario e della capacita' contrattile detrusoriale

- **VALSALVA LEAK POINT PRESSURE:** indica il livello di Pressione addominale a cui il paziente, posto in ortostasi e durante rapidi aumenti di pressione, perde urina.

Specialized Management of Urinary Incontinence in Men



Treatment Options for Urinary Incontinence in Male

- CONSERVATIVE TREATMENT

  Lifestyle interventions (e.g. weight loss,stop smoking)

  Pelvic floor muscle training (kegels)+/- biofeedback +/- SEF (stimolazione elettrica funzionale)

- MEDICATIONS

  Anticolinergici, Antimuscarinici, Duloxetine, Dapoxetina

- SURGERY

  Injectable bulking agents (DEFLUX)

  Urethral sling procedures

  Artificial sphincter

  Pro-act perineal balloons

Home Pelvic Muscle Exercises (PME): Kegels

- Contract the Muscle used to stop urine flow
- Exercise the muscle (10 seconds contraction followed by 10 seconds relaxation) 30-80 times per day
- Benefits may be seen in 8-12 weeks

Home Pelvic Muscle Exercises (PME): Kegels

- Often performed incorrectly!
- Success Rates Variable
- Better for mild incontinence
- Up to 45% cured/improved at 12 months

Mouritsen et al

Biofeedback

- For patients who have difficulty performing a Kegel
- Helps identify the correct muscles using "Feedback."

E-stim

Electrical stimulation of pelvic floor muscle via anal-intraurethral probe

Surgical correction of Male Stress Urinary Incontinence

- **Surgery which increase urethral pressure:**

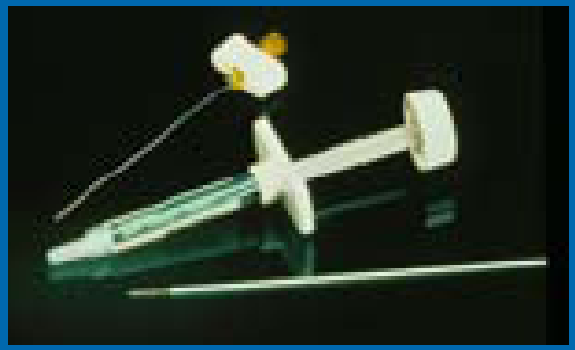
  Urethral bulking agents, AUS, Pro-act

- **Surgery which restore urethral support:**

  Urethral Sling

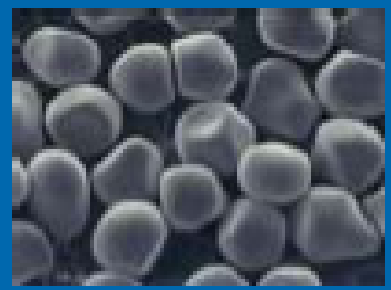
Injectable Bulking Agents

Bovine Collagen



Purified cross-linked dermal collagen
Biodegradable

Durasphere®

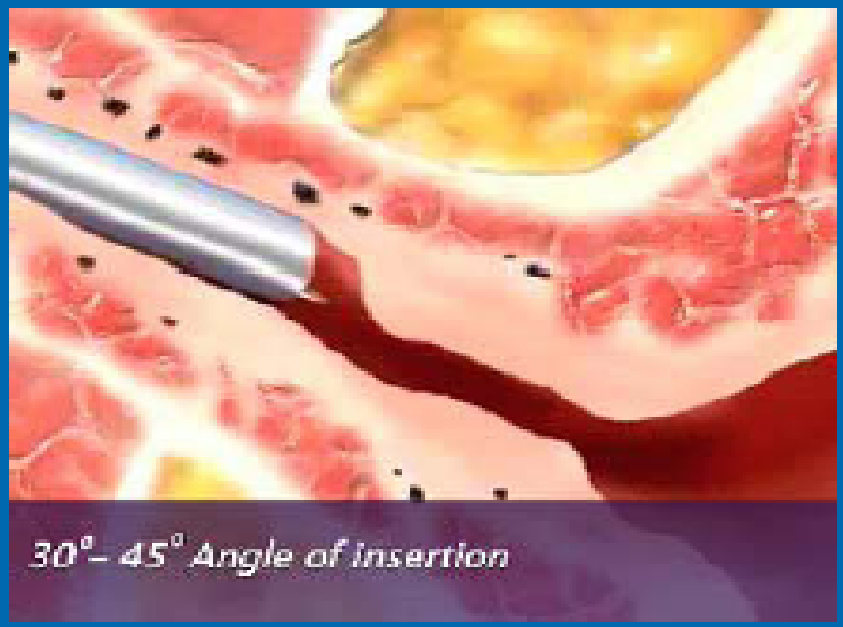


carbon-coated zirconium oxide beads

Tegress®

ethylene vinyl alcohol co-polymer dissolved in dimethyl sulfoxide (DMSO)

Transurethral Injection



"Initial experience of transurethral bulking agent (deflux injection) in patients presenting with incontinence after Radical Prostatectomy or in advanced Ca prostate involving posterior urethra/sphincter and unresponsive to conservative measures"

Sood, R.; Kathuria,

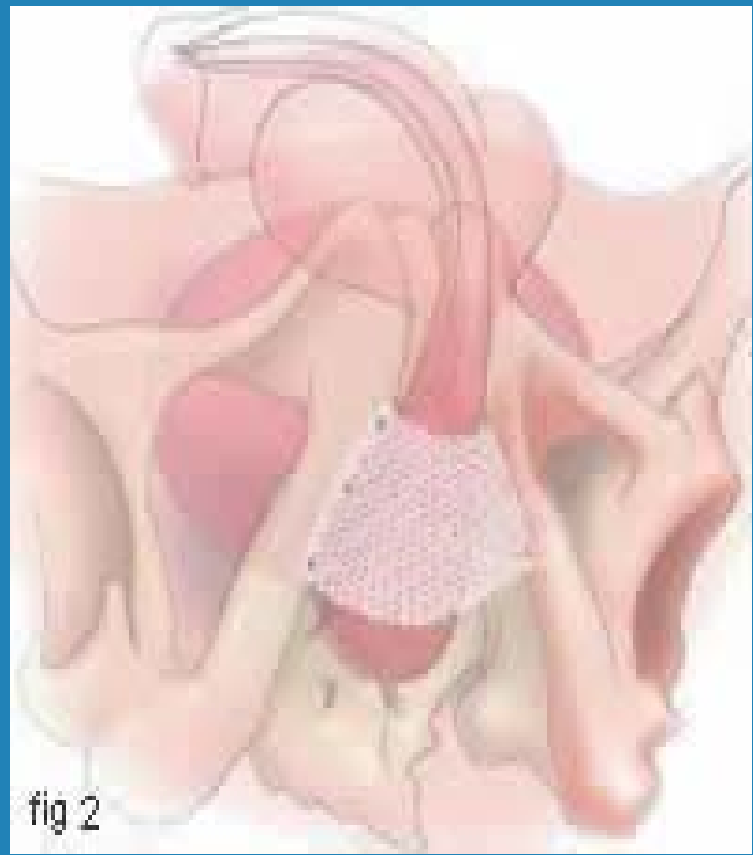
Urology Volume: 70, Issue: 3, Supplement, September, 2007, pp. 229

Injectable Bulking Agents

- **Safe** – few side effects
- **Effective** (60-80% Dry at 2 years f/u)

- **Easy on Patient**
  - Outpatient or office-based procedure
  - local anesthesia

SLING SOTTO-URETRALE



Transobturator Sling Suspension for Male Urinary Incontinence Including Post-Radical Prostatectomy

Peter Rehder*, Christian Gozzi

European Urology

52, 2007 (860-867)

The Male Perineal Sling Assessment and Prediction of Outcome

Fischer, Melissa C.; Huckabay, Chad; Nitti, Victor W.

The Journal of Urology

Volume: 177, Issue: 4, April, 2007, pp. 1414-1418

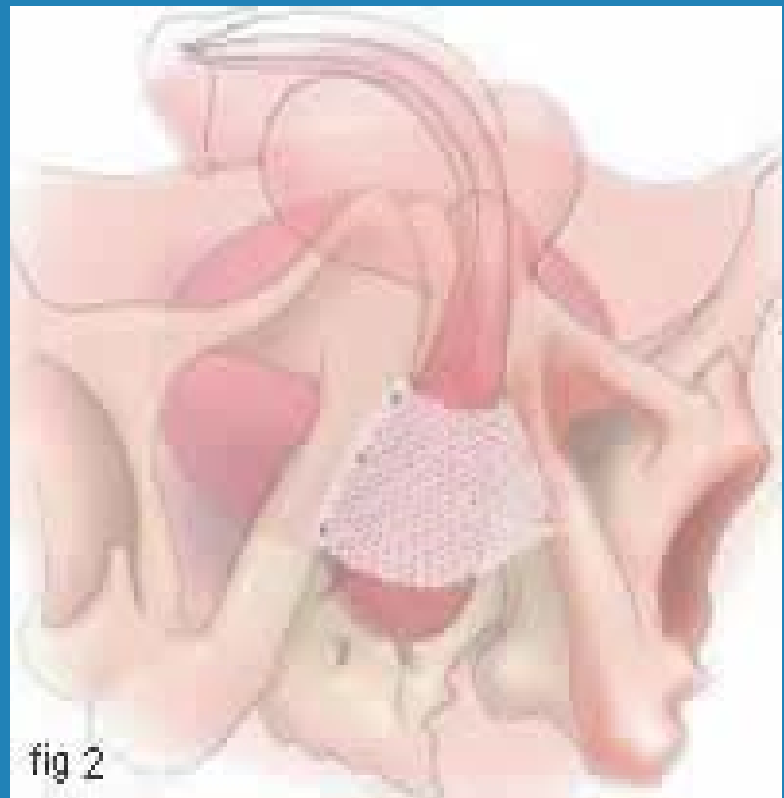


fig 2

“ Adjustable Suburethral Sling (Male Remeex System®) in the Treatment of Male Stress Urinary Incontinence: A Multicentric European Study “

Sousa-Escandón, Alejandro; Cabrera, Javier; Mantovani, Franco; Moretti, Marco; Ioanidis, Evangelos; et. al.

European Urology Volume: 52, Issue: 5, November, 2007, pp. 1473-1480

Objective:

To evaluate the effectiveness of a readjustable sling for the treatment of male stress urinary incontinence (SUI).

Materials and methods:

51 male patients with SUI sec to radical prostatectomy , TUR and open prostatectomy . Duration of incontinence ranged from 1 to 10 yr with an average of 3.5 yr.

Results: 5 pts were regulated early post-op period, 44 pts required a second regulation beetween 1-4 mo after sugery, 17 other required more than one delayed regulation

Average f-u was 32 mo. ***Cure rate 65%*** (33pts), improvement 20% (10), unchanged 15% (8).

one case removing mesh owing to erosion and 2 cases for infections.

Conclusions: The MRS1 shows to achieve of good midterm results in almost 85% of patients without significant postoperative complications.

SFINTERE URETRALE (AUS)

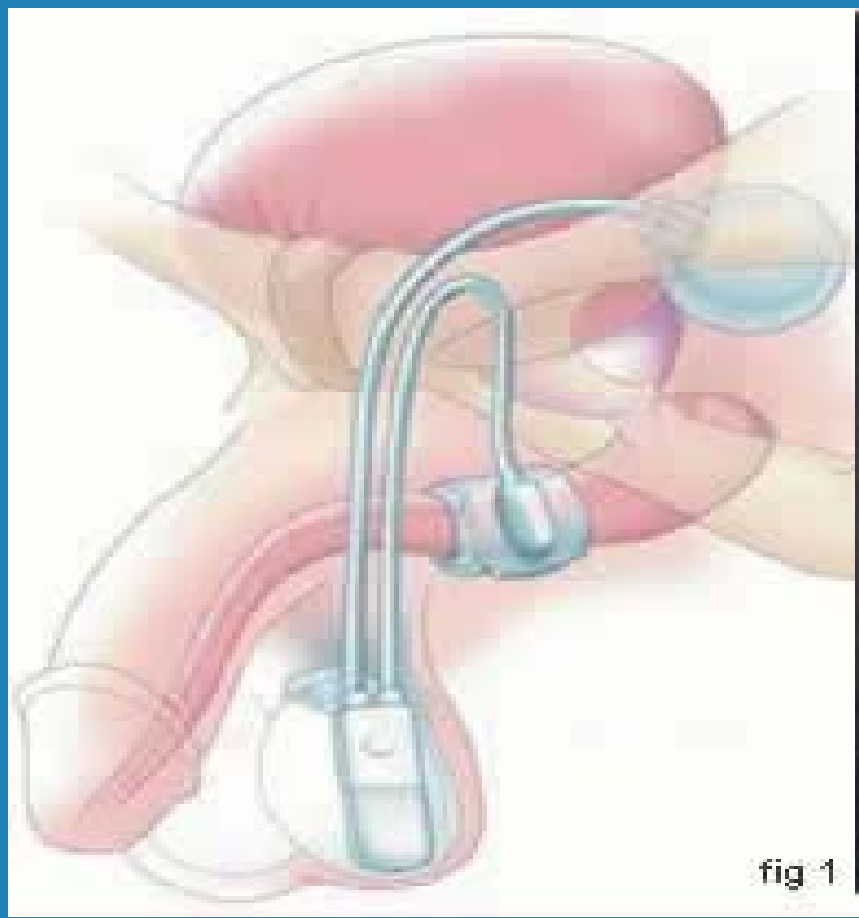
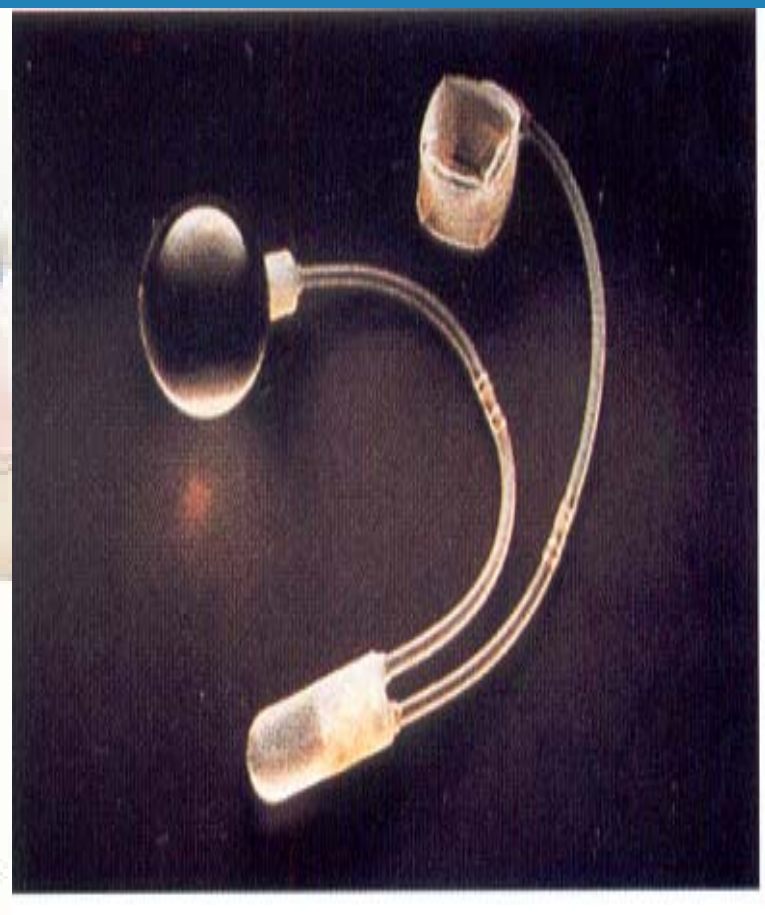


fig 1



“13 Years of Experience With Artificial Urinary Sphincter Implantation at Baylor College of Medicine”

H. Henry Lai, Elias I. Hsu, Bin S. Teh, E. Brian Butler and Timothy B. Boone*,†

The Journal of Urology Volume: 177, Issue: 3, March, 2007, pp. 1021-1025

Purpose: We reviewed *13 years of experience with artificial urinary sphincter implantation*

Materials and Methods: Between 1992 and 2005, 270 patients underwent artificial urinary sphincter implantation, followup data were available on 218 of them. *Mean followup was 36.5 months (maximum 151.4).*

Of the 218 patients *60 underwent prostatectomy and pelvic radiation, 116 underwent prostatectomy without radiotherapy, 11 had neurogenic bladder and*

31 underwent secondary artificial urinary sphincter implantation

Results: The complication rate did not differ among the 4 treatment groups.

infection in 5.5% of cases, erosion in 6.0%, urethral atrophy in 9.6%, mechanical failure in 6.0% and surgical removal or revision in 27.1%.

Median time to complications was

3.7 months for infection, 19.8 months for erosion, 29.6 months for atrophy, 68.1 months for failure and 14.4 months for surgery.

At 5 years 75% of patients were free from revision or removal.

The rate of bladder neck contracture was high in artificial urinary sphincter candidates, especially in irradiated patients (36% and 57%, respectively).

Two-stage UroLume® stent and artificial urinary sphincter placement offered long-term contracture and continence control in 8 of 11 patients with recurrent anastomotic contractures.

Conclusions: An artificial urinary sphincter is durable treatment for sphincter deficiency even in patients with a history of complications, neurogenic bladder, pelvic radiation, bladder neck contracture, Valsalva voiding, or failed injectables or slings.

Pro-Act-System

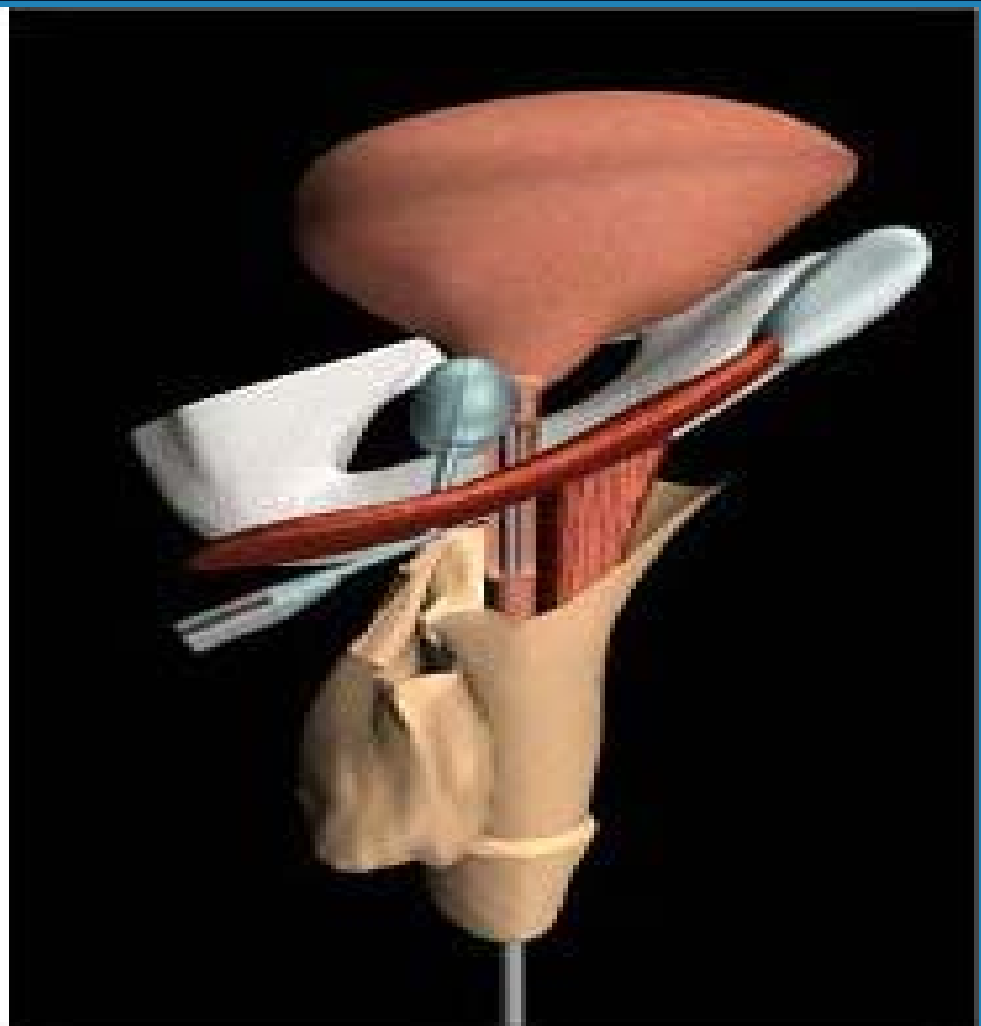


Abb.: Pro-ACT-System

EAU 2007 ABST[V101] - Transrectal Ultrasound-Guided Implantation of the ProACT System in Patients with Post-Radical Prostatectomy Stress Urinary Incontinence

Thursday, 22 March 2007

Gregori, A., Goumas, I.K., Galli, S., Knez, R., Scieri, F., Stener, S., Deliperi, A., Zaramella, S., Favro, M., Ranzoni, S., Terrone, C., Gaboardi, F.

Presented on March, 23 2007

Grazie per l'attenzione...