DISFUNCTIA ERECTILA

Definitia
Evaluarea barbatului cu DE
Tratament medicamentos
Insuficienta tratamentului medicamentos

Definitie

- Prezenta, recurenta/continua/constanta/circumstantiala a incapacitatii de a obtine si/sau mentine o erectie suficienta pentru un act sexual de calitate
  - Incapacitate de penetrare
  - Penetrare cu durata scurta
  - Tumescenta peniana insuficienta

PREVALENTA

An	Tara	N (total)	30-39	40-49	50-59	60-69	> 70
1998	USA	1790	?	39%	48%	57%	67%
1999	USA	1249	9%	11%	18%	NA	
2000	DE	4489	2.3%	9.5%	15.7%	34.4%	53.4%
2000	Australia	1240	8.4%	13.1%	33.5%	51.5%	69.2%
2000	Maroc	646	5%	?	?	56.7%	?
2000	Egipt	594	15.9%	?	?	35.7%	?
2000	Finlanda	2178	?	?	67%	76%	83%
2000	Brazil	825	2%	9%	16%	27%	49%
2000	Olanda	1779	10%	-	-	-	78%
2001	Spania	2476	1%	1.7%	4.5	11.7	
2004	Multinational	27839	11%	15%	22%	30%	37%
2005	Austria	2869	-	28.9%	37.5%	-	71.2%

Oxford, 2009

ETIOLOGIE (I)

Stil de viata

Fumat — DE arteroiogena, venoasa

R- tratament

Calitate somn

Management stresului

Adcitia droguri

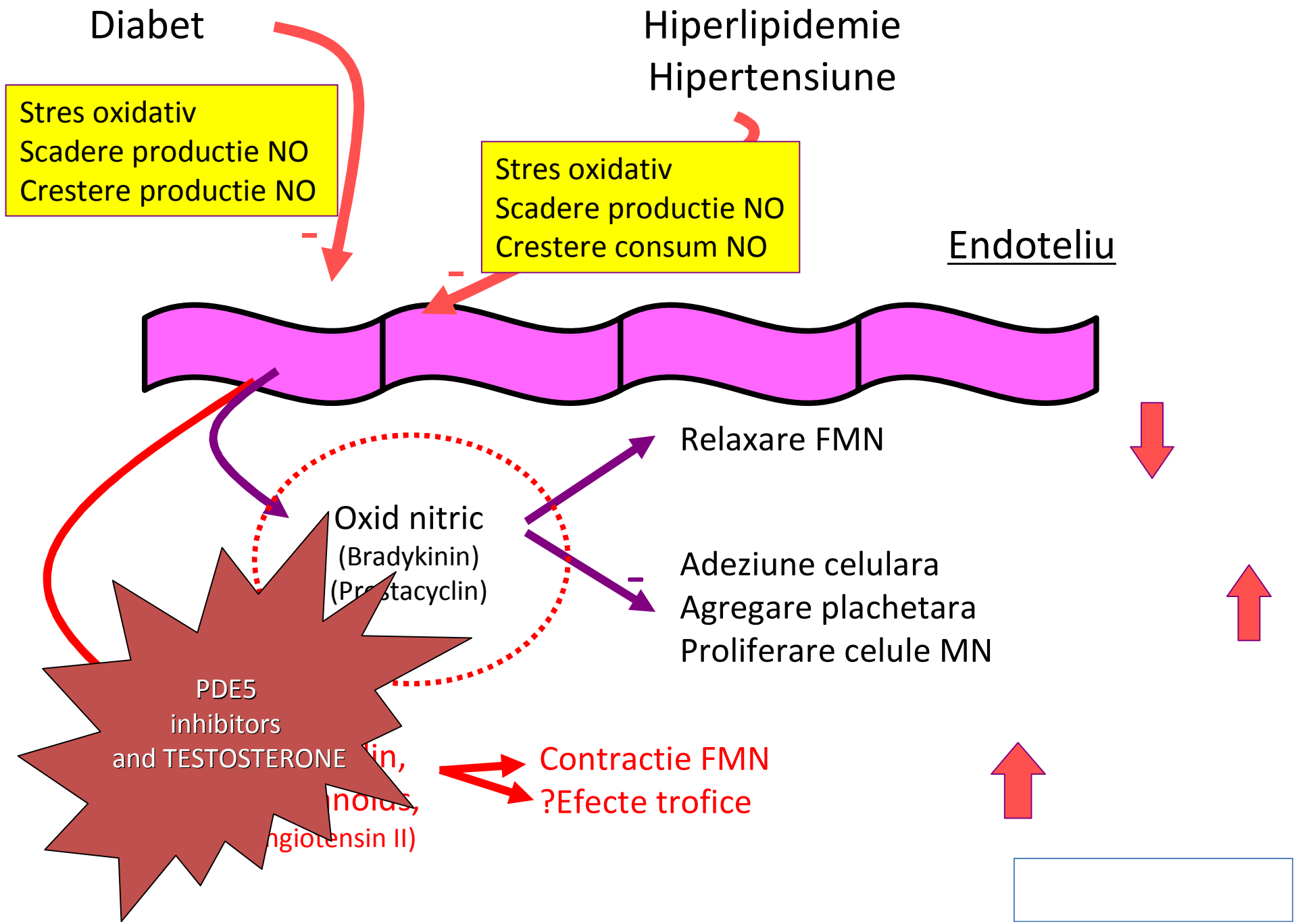
Aportul alimentar excesiv

ETIOLOGIE (II)

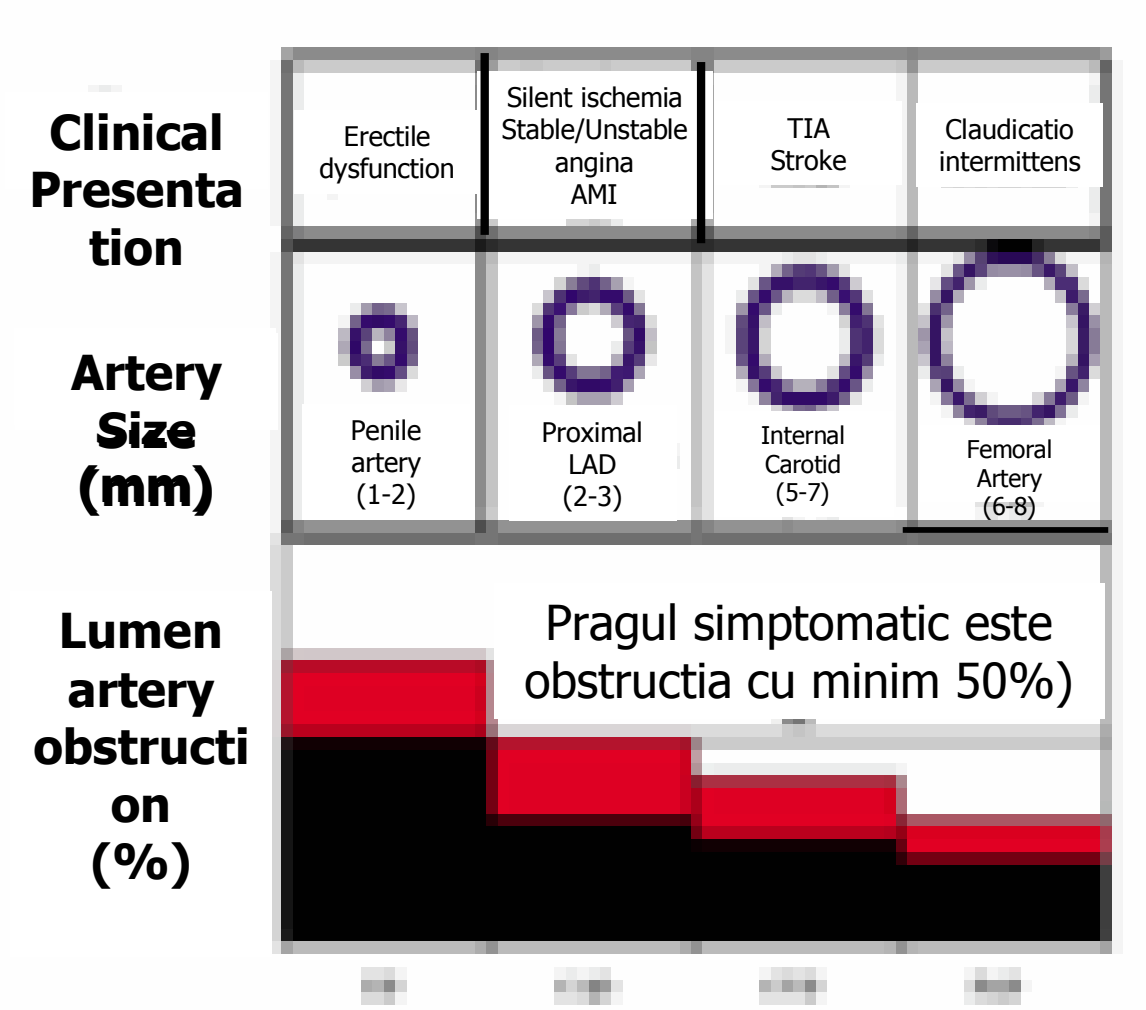
Factori de risc vasculari- endoteliali

HTA	insuf. Arteriala cavernoasa/medicatie/cumul FDR
Dislipidemia	HC altereaza relaxarea FMN cavernoase LDL altereaza venoocluzia FDR independenti de DE
DZ	cel mai complet model de DE

Supraponderalitatea

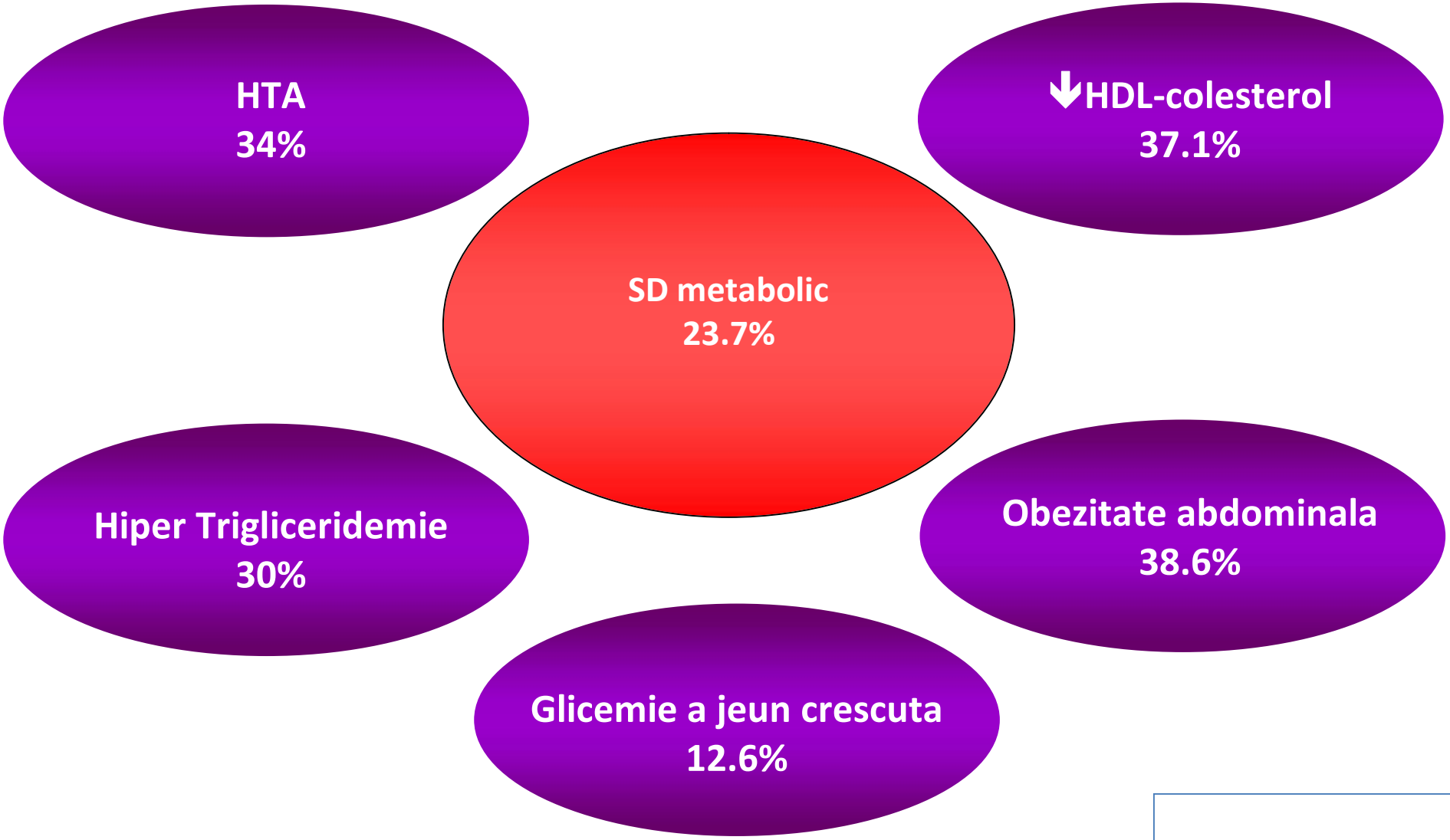

Diabet
Hiperlipidemie
Hipertensiune
Stres oxidativ
Scadere productie NO
Crestere productie NO
Stres oxidativ
Scadere productie NO
Crestere consum NO
Endoteliu
Relaxare FMN
Oxid nitric
(Bradykinin)
(Prostacyclin)
Adeziune celulara
Agregare plachetara
Proliferare celule MN
PDE5
inhibitors
and TESTOSTERONE
Contractie FMN
?Efecte trofice

DE – varful eisber-ului sd. metabolic



Montorsi P et al. *Eur Urol.* 2003;44:352-354.

SD metabolic este cu prevalenta mare



ETIOLOGIE (III)

Afectiuni medicale		
1.Boli neurologice	leziuni arii centrale	scleroza multipla
		epilepsia lob temporal
		B. Alzheimer
		posttraumatic
		postchirurgical
		postradioterapie
	afectiuni periferice	DZ (cai aferente/eferente)
		posttraumatic
		postchirurgival – n. cavernosi
2. Boli respiratorii	rara DE	BPCO- hipoxie/hemoconcentrare
3. Insuficienta hepatica		deficit sever de TT
4. Insuficienta renala cronica		insuficienta vasculara+ PRL+
		medicatie + boala de baza
5. Endocrinopatii	Hipogonadism	central,periferic,iatrogen
	Hiperprolactinemie	
	hipotiridie	

ETIOLOGIE (IV)

Afectiuni chirugicale

1. Urologie	interentii vasculare prostatectomie radicala TUR – P – doar ejaculare retrograda Fractura peniana Hipospadis malformatii/micropenis boala Peyronie
2. Ortopedie	afectare medulara

ETIOLOGIE (V)

IATROGENIE

-Diuretice: tiazidice, spironolactona, Furosemid

-Agenti centrali: MetilDopa, Clonidina, Rezerpina

-Alpha blocanti: Prazosin, Terazosin

-Alpha beta blocante: Labetalol

-Vasodilatatori nonadrenergici: Hidralazina

-Blocanti simpatici: Guanetidina

-ACEI: Captopril, Enalapril, Lisinopril

-Psihotrope: fenotiazine, SSRI, Thioxantine, Haloperidol

-Antiulceroase: Cimetidina, Ranitidina, Famotidina

-Medicamente hormonale: estrogeni, antiandrogeni

-Anti BHP

Evaluare:
de ce/cand este necesara?

- INCAPACITATEA DE A OBȚINE sau MENȚINE o erecție de calitate (similară cu cea anterioară) sau suficientă pentru penetrare

Rationamentul evaluarii

- Sa confirmam diagnosticul
  - Istoric detaliat

- Evaluarea severitatii problemei
  - Obiectivabil cu chestionare (SHIM,IIEF,QEQ)

- Sa identifice conditiile organice/psihologice/iatrogene ce pot asocia/determina DE
  - Ex: DZ, hiperlipemie, depresie, HTA, hipogonadism

- Sa identifice pacientii eligibili pentru o anume terapie
  - Ex: malformatii vasculare operabile
  - Componenta psihogena tratabile
  - Disfunctii endocrine tratabile

TESTUL SHIM

1. Cum va apreciati capacitatea de a obtine si mentine erectia?
2. Cat de des tumescenta peniana este suficienta pentru penetrare?
3. Cat de des ati putut mentine erectia suficient pentru un act sexual de calitate?
4. Cat de greu a fost sa mentineti erectia suficient de mult?
5. Cat de des actul sexual este satisfacator pentru dumneavoastra?

Interpretare

- NORMAL > 22
- USOARA 17-21
- MODERATA 11-16
- SEVERA < 10

Considerand acestea.....

- Exista o evaluare de baza, aplicata tuturor cazurilor
- Investigatii speciale, secundare adresate tintit anumitor cazuri

Evaluare standard(I)

Anamneza sexuala

- Clarificarea exacta a simptomelor pacientului
    - *!! Uni pacienti confuza erectia cu orgasmul/ejacularea*

- Elementele principale ale anamnezei sexuale:
  - Natura problemei
  - Contextul psihosocial al problemei
  - Cronologia problemei
  - Severitatea problemei
  - Rezultatele tratamentelor anterioare
  - Definirea asteptarilor si nevoilor partenerei

Evaluare standard(II)

Antecedente personale patologice

Factorii de risc cunoscuti ai DE sunt:

- Inaintarea in varsta
- Hipertensiunea
- Ateroscleroza
- Diabetul zaharat
- Fumat
- Depresie
- Dislipidemie
- Traumatism/interventii chirurgicale peniene/pelvine
- Afectiune neurologica
- Endocrinopatie
- Substante chimice medicale/recreationale

Evaluare standard(III)

- DE organica
  - Debut treptat/gradual
  - Constanta
  - Afecteaza si erectiile noncoitale
  - In toate circumstantele

- DE psihogena
  - Debut brusc
  - Situationala: grade diferite de DE in circumstante diverse
  - Asociaza erectii nocturne/matinale normale

Examen clinic

Evaluare standard: examen clinic (IV)

- Nu trebuie sa fie complet (pe aparate si sisteme)

- Obligatorii:
  - Examen genital complet
  - Examinare caractere sexuale secundare
    - Ginecomastia, distributia pilozitatii corporale, distributia grasimii
  - TA, FC

Evaluare standard(V)

- Valoare controversata
  - Tuseu rectal
  - Examinare vasculara periferica
    - Frecvent evaluarea pulsului la artera pedioasa este suficient
  - Examinarea neurologica

Parerea mea:

- *Probabil inutile la marea majoritate a barbatilor*
- *Examne tintit legat de prezenta anumitor simptome*

Investigatii

Evaluare standard(VI)

- Uzual:
  - Glicemie a jeun
  - Profil lipidic a jeun
    - CT,LDLC,HDLC,Tg
  - Testosteron seric total
  - Prolactina serica
  - TSH
- Consens WHO
  - Glicemie a jeun
  - HbA1c
  - Profil lipidic
  - Testosteron total

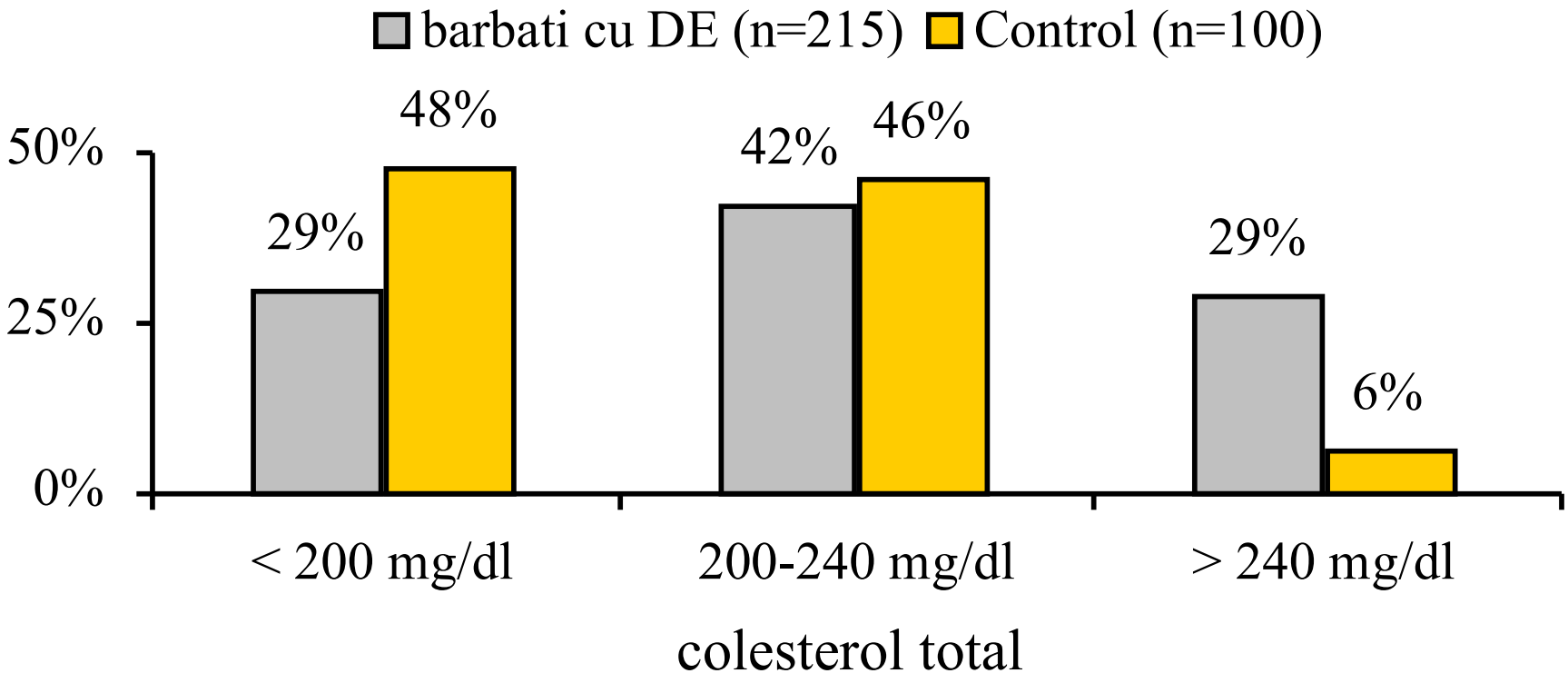
Evaluare standard(VII)
Lipide

- DE este un marker al aterosclerozei
  - Factori de risc ai aterosclerozei = risc de DE
    DZ, HTA, fumat, dislipidemie
  - La unele cazuri, dislipidemia este prezenta dar nerecunoscuta

- Screening: dupa 8 ore de repaus alimentar

- Cel mai importanta: raportul HDL/LDL (ideal 1 / 4-5)
  - HDL mare (. 60 mg%) este bun
  - HDL scazut (< 40 mg%) faciliteaza procesul de ATS

Dislipidemia la barbati cu DE



Roumeguere et al, Eur Urol, 2004

Evaluare standard (VIII) glicemie

- DZ este una din cele mai frecvente cauze de DE
- In prezenta DZ, DE apare cu 10 ani mai repede
- ½ barbati cu DZ au hipogonadism
- Uneori DZ este cnecumoscut anterior debutului DE

- ! Glicozuria nNU este un test screening adecvat pentru DZ

Diagnosticul DZ

- Diagnostic: glicemia a jeun > 120 mg%

  TTGO: glicemie la 2 ore > 200 mg%

  HbA1c: > 6.5%

  glicemie intamplatoare > 200 mg%

Evaluare standard (IX)
Testosteron (T)

- Cand?
  - Dimineata: ritm circadian al T
  - Pana la orele 11.00
- CE test?
  - Testosteron Total
  - Testosteron liber
  - Testosteron biodisponibil
  - 98% din T legat de proteine
  - Majoritarea albumine si SHBG
  - 2% este nelegat = liber

Testostreron total (2 determinari) ca test screening
Completare cu SHBG, FSH, LH, TSH,PRL

www.issam.ch

The International Society for the Study of the Aging Male
ISSAM

About ISSAM

The International Society for the Study of the Aging Male (ISSAM) was formed and incorporated in the United Kingdom in 1997 with the objective of promoting research, study and education on all matters relating to men's health after the age of 30.

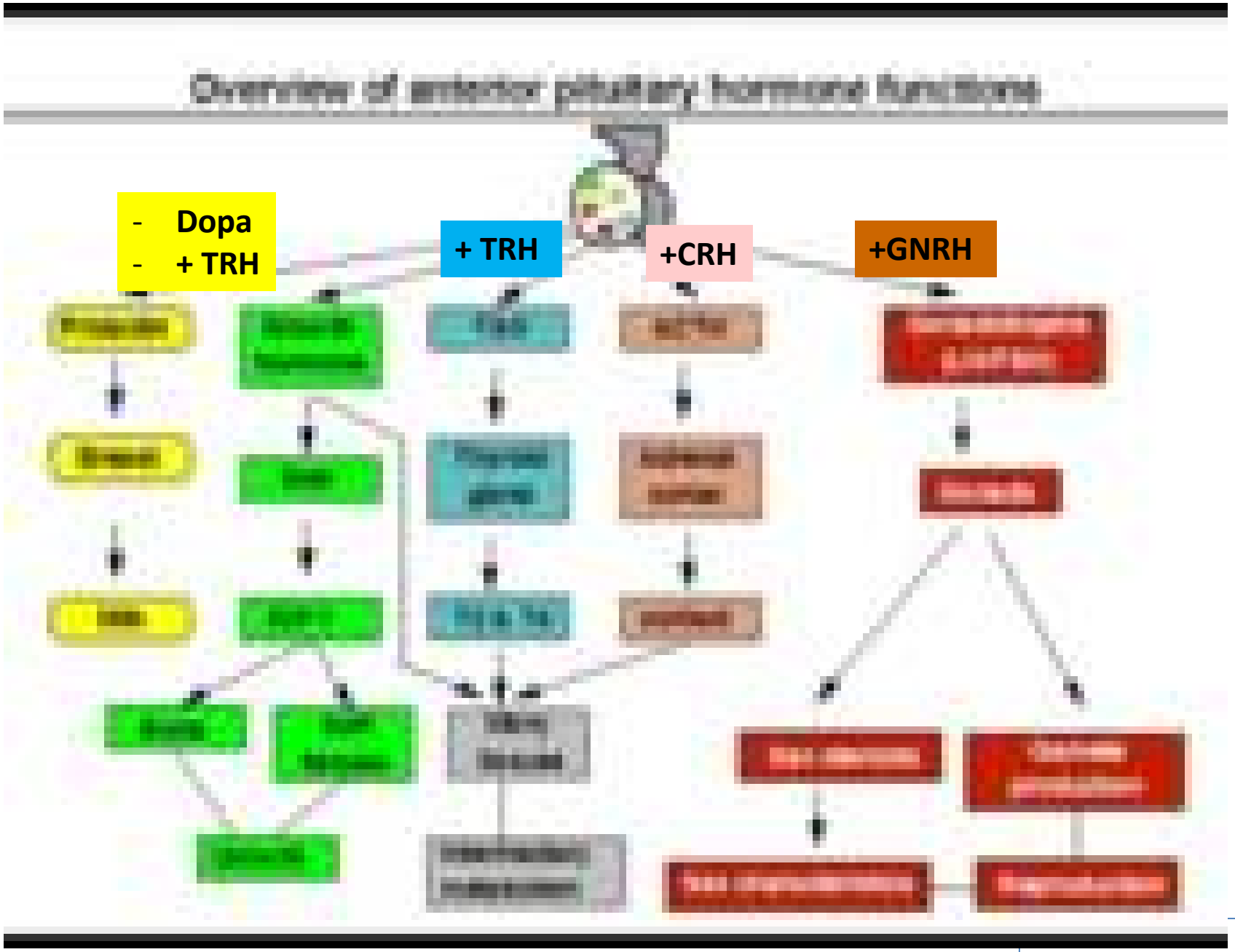
The Society aims to encourage physicians and other health-care professionals to understand male illness in the context of the aging process as a whole and to adopt a multi-disciplinary approach to caring for male patients. More specifically, the Society sets out to promote the concept of healthy aging.

Society's official journal, The Aging Male

Please also visit this website:
4th World Congress on the Aging Male
Prague, Czech Republic, February 26-29, 2004

Second Asian ISSAM Meeting on the Aging Male

About ISSAM | Objectives | Rational
Co-Sponsor Criteria | Affiliation Criteria | Endorsement Criteria
Strategic Intent | Testosterone Calculator | Aging Males' Symptom Scale (AMS)
Subscription Form


Overview of anterior pituitary hormone functions
- Dopa
- + TRH
+ TRH
+CRH
+GNRH

EVALUARE STANDARD (X)

Prolactina

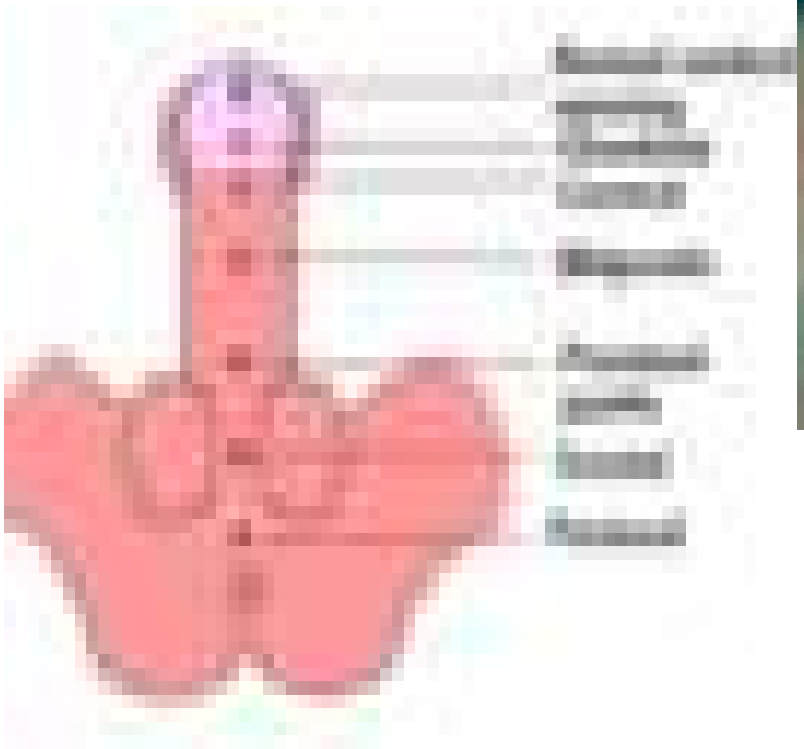
- Hiperprolactinemia
  - Izolata, cauza rara de DE
  - Adenom anterohipofizar secretant de PRL
  - Adenom mare, ce impiedica ajungerea Dopaminei la hipofiza
  - Clinic: ginecomastie, galactoree, scadere libidou si DE, cefalee fronto-parieto-occipitala
- Uneori TT este usor scazut
- Secundar, netumoral
  - hipoTiroidie, stres, IRC,IHC, medicatie

Cine are nevoie de investigatii suplimentare?

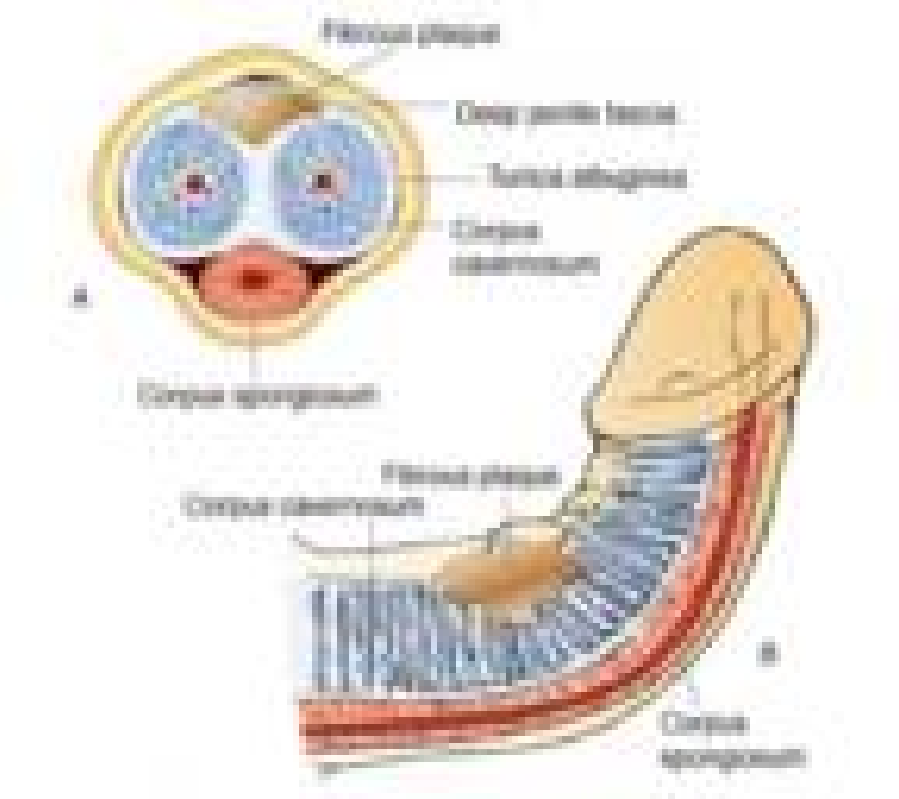
Indicatii pentru evaluare SUPLIMENTARA

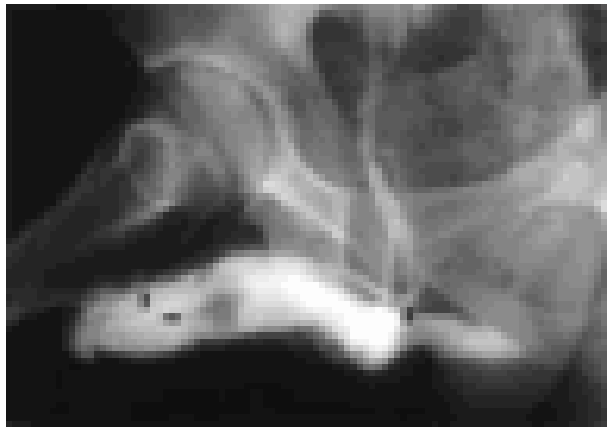
- Traumatism perineal sau pelvin
- Afectiuni endocrinologice
- Afectiuni psihiatrice
- Probleme psihologice primare
- DE veche (lifelong)
- Anomalii anatomice peniene
  - Boala Peyronie, Traumatism, hypospadias, penis ingropat
- Lipsa de raspuns la tratamentul standard
- Cererea pacientului
- Afectiune vasculara/neurologica complexa

HIPOSPADIAS

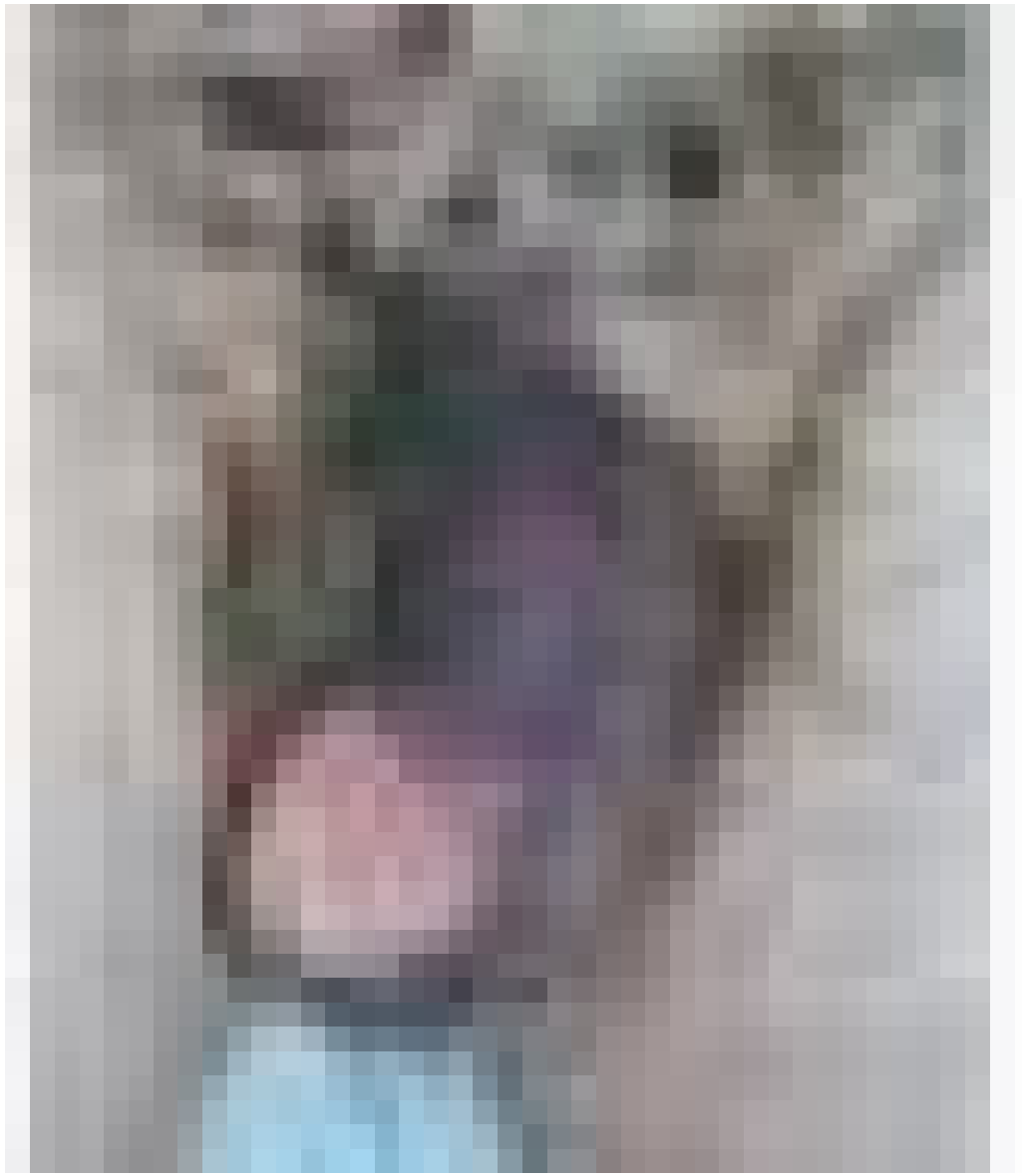


B. Peyronie



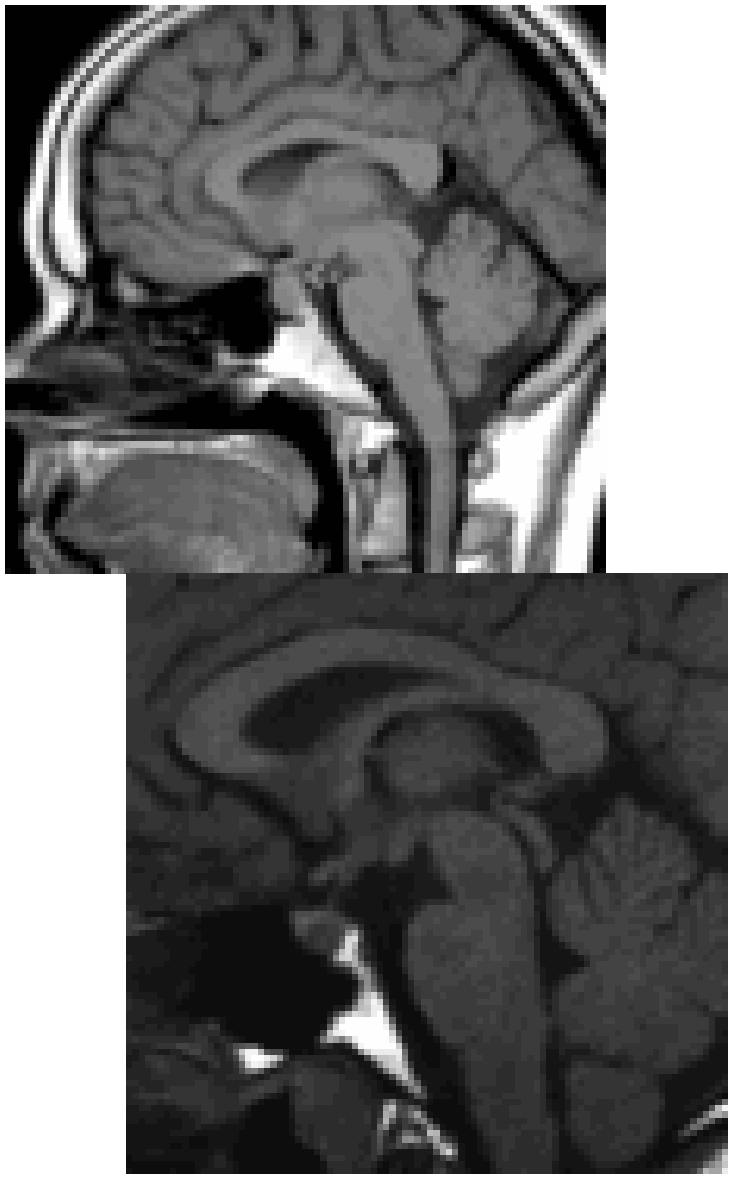


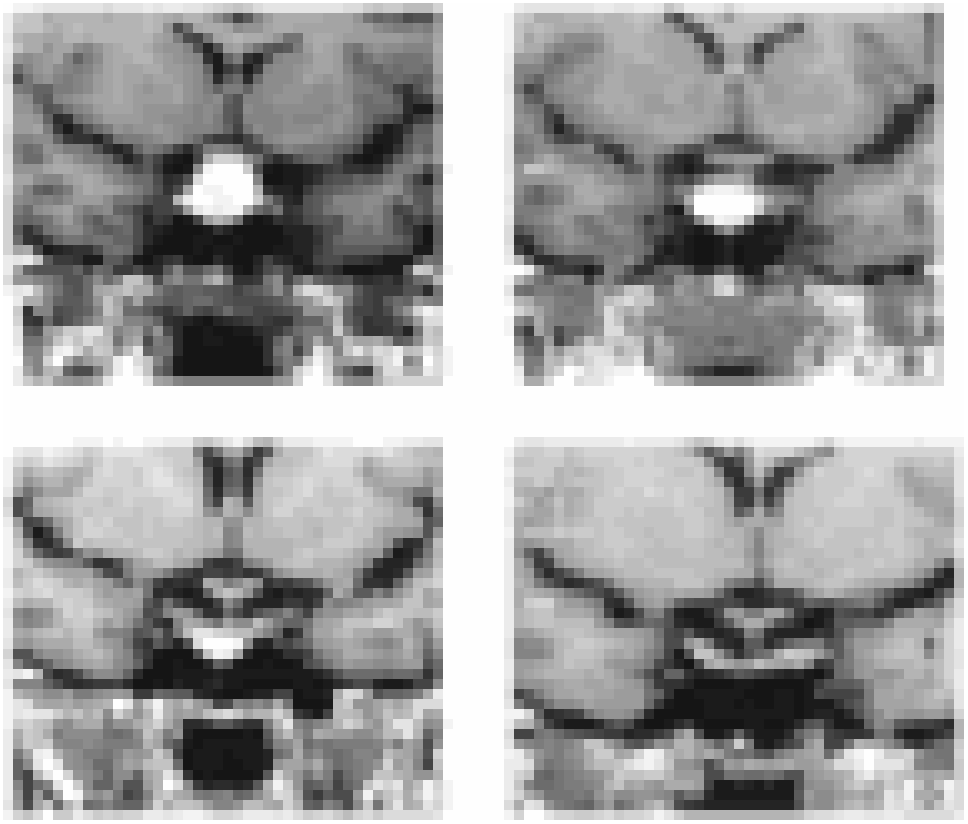
TRAUMATISME PENIENE



Evaluare endocrinologica

- Daca PRL sau TT sunt modificate completarea analizelor:
  - Repetare PRL sau TT (! 2 determinari pt. diagnostic)
  - FSH,LH
  - ACTH+ cortizol, TSH + FT4, diureza
- DE poate fi secundara unei disfunctii tiroidiene
  - TAH, FT4, Ac a TPO, ac aTG
- CT sau RMN – adenom hipofizar



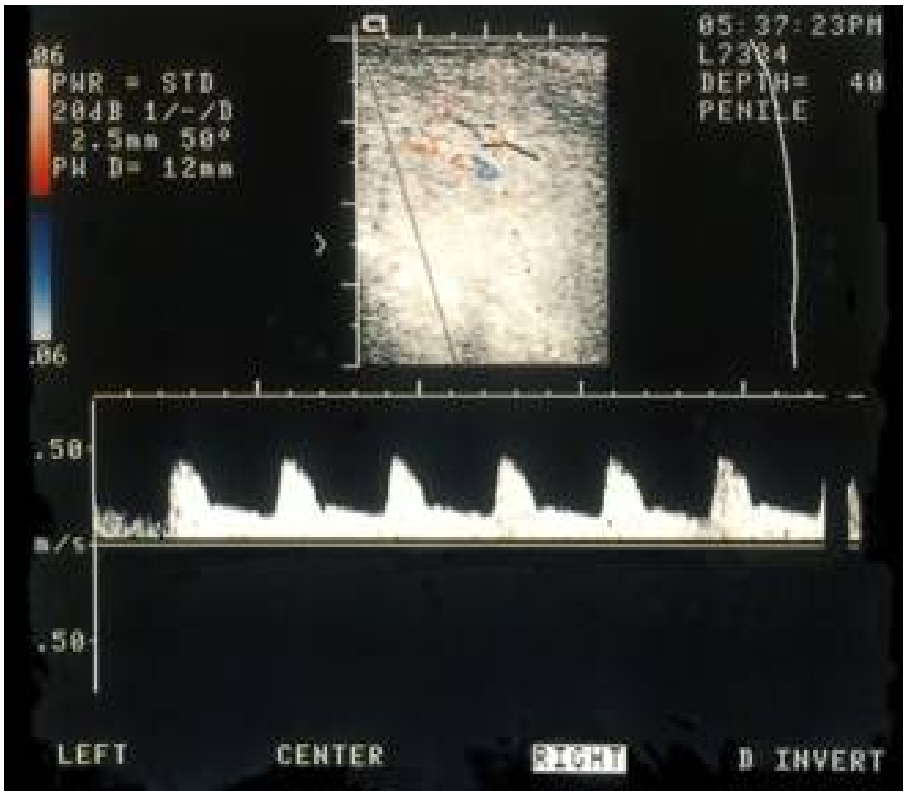


Evaluare vasculara

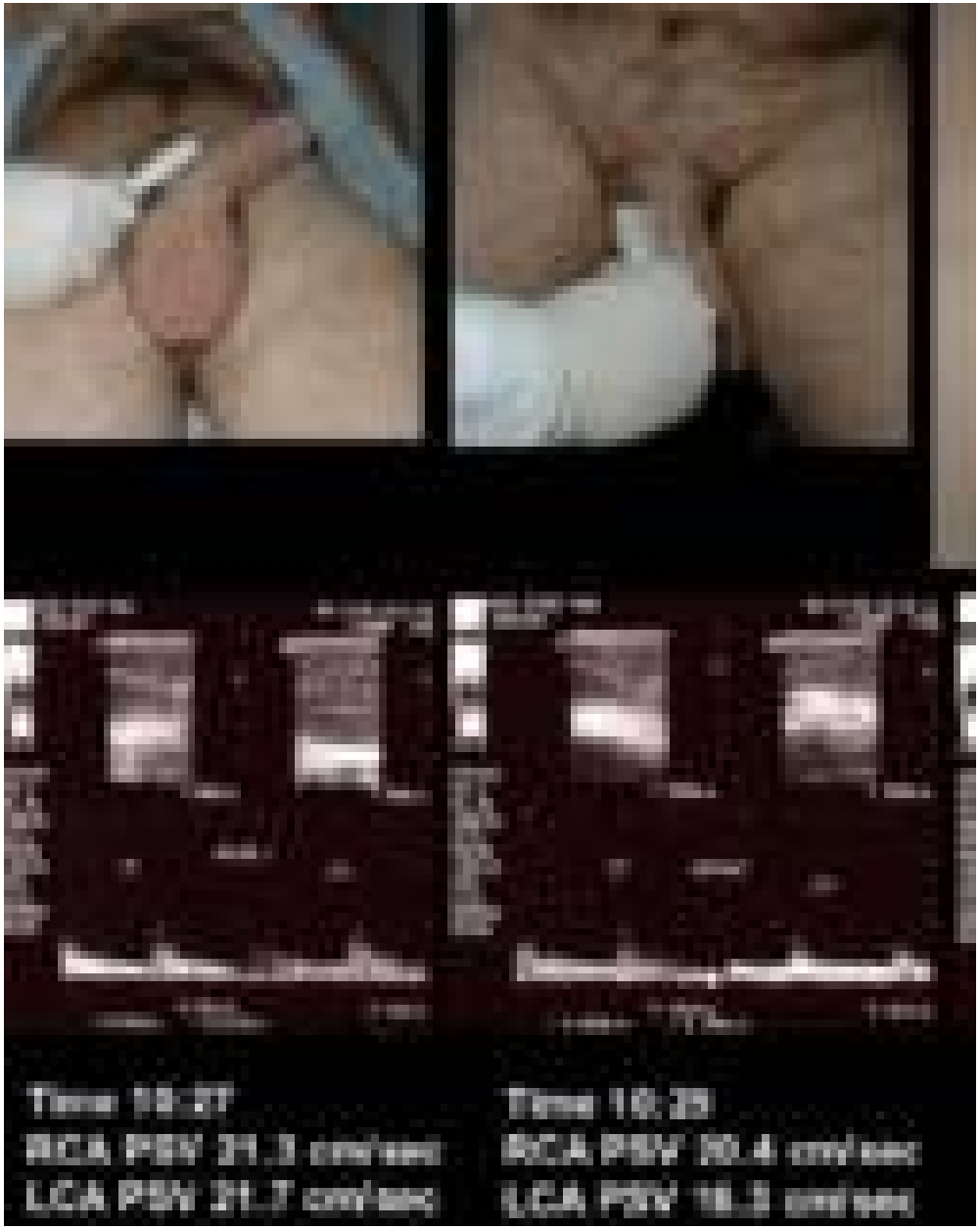
- Initial era efectuata la toti pacientii
- Acum se efectueaza la categorii speciale de pacienti

- Indicatii de evaluare:
  - Selectia cazurilor pentru operatie vasculara de reconstructie
  - Cazuri medicolegale
  - Cererea pacientului
  - DE circumstantiale
  - Prezenta doar a DE

Ecografie Color Doppler

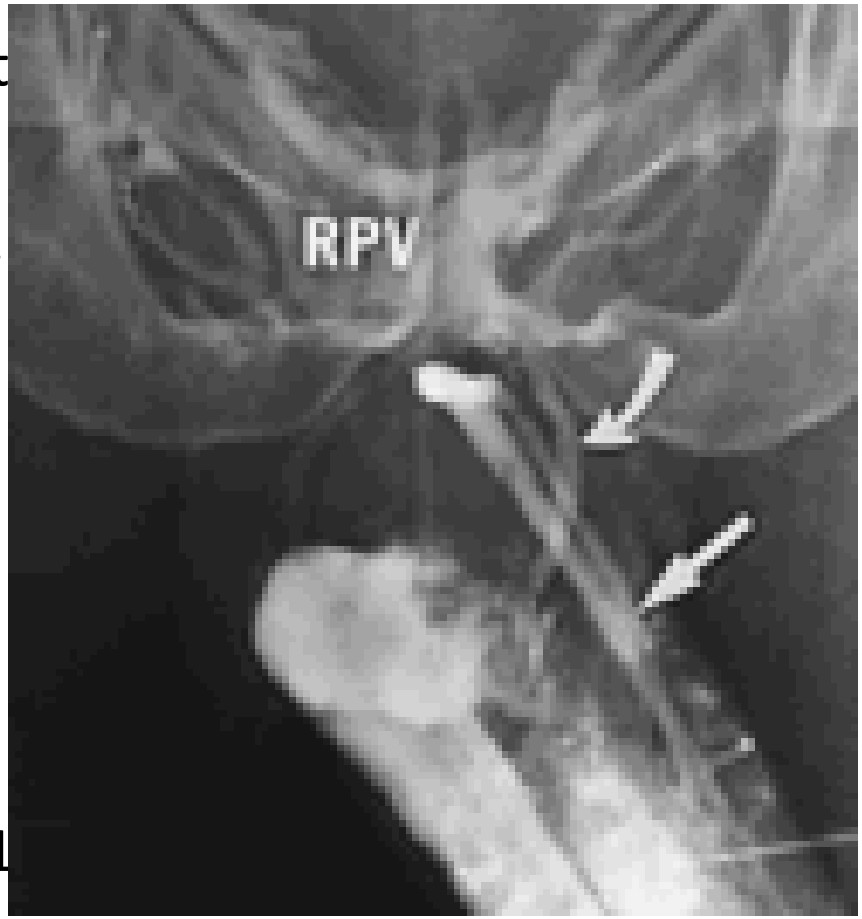


- Methodologie
  - Transducer linear (5-10 MHz)
  - Inducere erectie: administrare intracavernoasa de PGE1 (Alprostadil) sau intrauretrala (MUSE)
  - Masurare la 10 minute de la injectare
- Resultate
  - PSV < 25cms/sec suggests penile artery insufficiency
  - PSV > 35cms/sec is normal
  - Penile veno-occlusive dysfunction if PSV > 30cms/sec and the end diastolic velocity > 3-5cms/sec

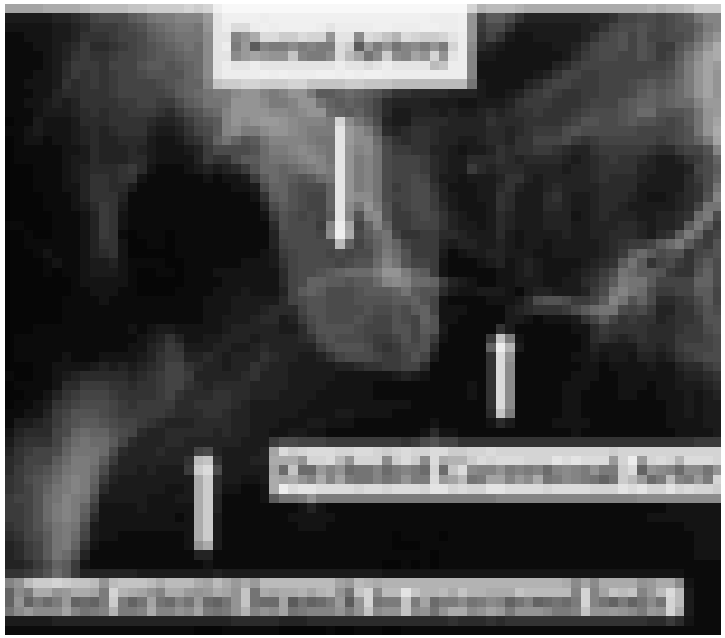

Time 10:27
RCA PSV 31.3 cm/sec
LCA PSV 31.7 cm/sec
Time 10:29
RCA PSV 30.4 cm/sec
LCA PSV 18.3 cm/sec

Infuzie dinamica cavernosa
Cavernosometrie si cavernosografie (DICC)

- Aprecieaza functia vasculara art venoasa
- Indicata doar in cazul suspiciuni incompetente venoase
  - DE primara, congenitala
  - Fractura peniana
  - Traumatism perineal/pelvin
  - Boala Peyronie.
- Studiul dupa injectarea de PGE1



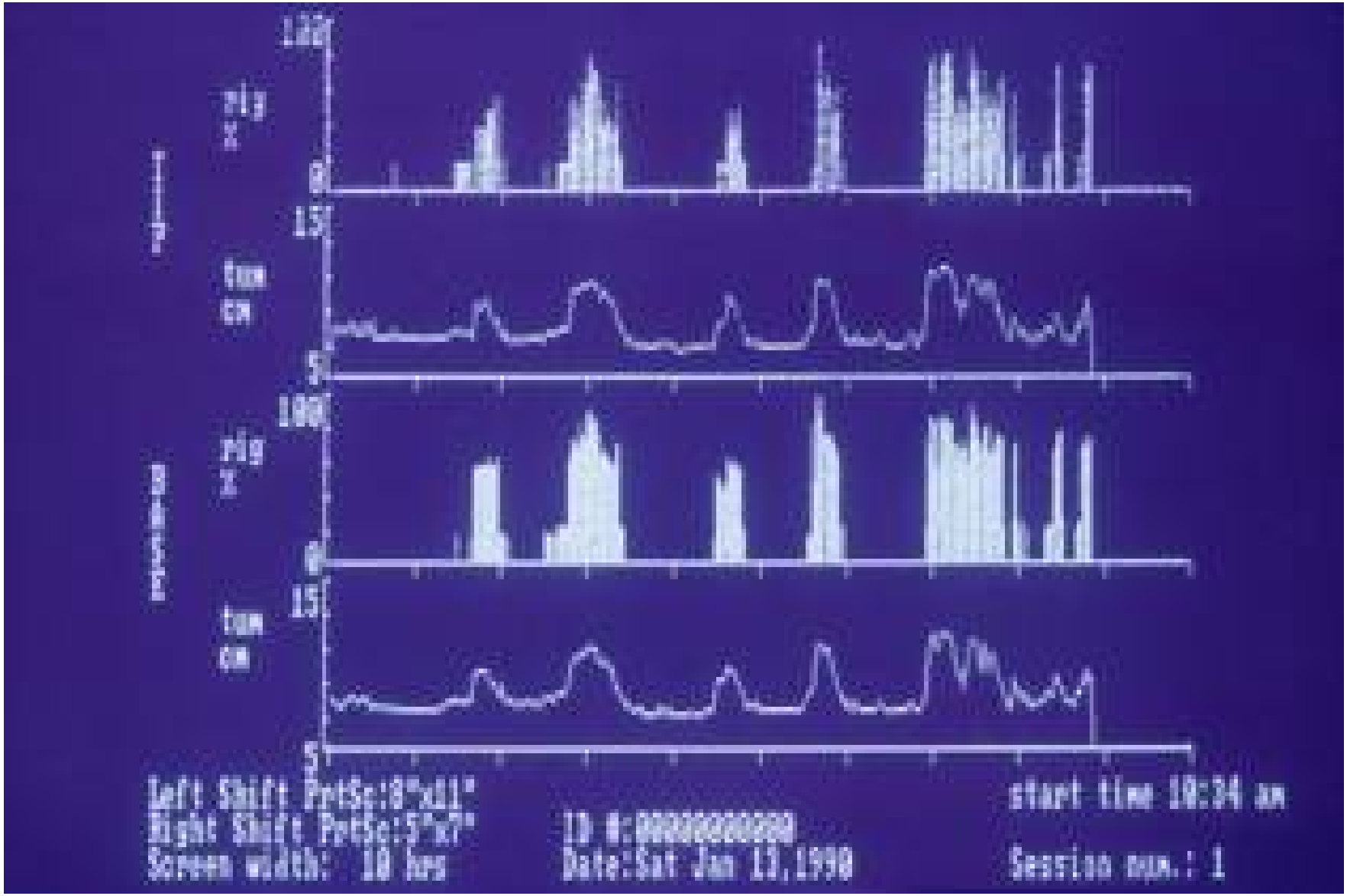
Arteriografie – artera pudendala



- Presupune relaxarea FMN cavernoase
- Injectare de PGE1 in prelabil

Testul tumescentei peniene nocturne

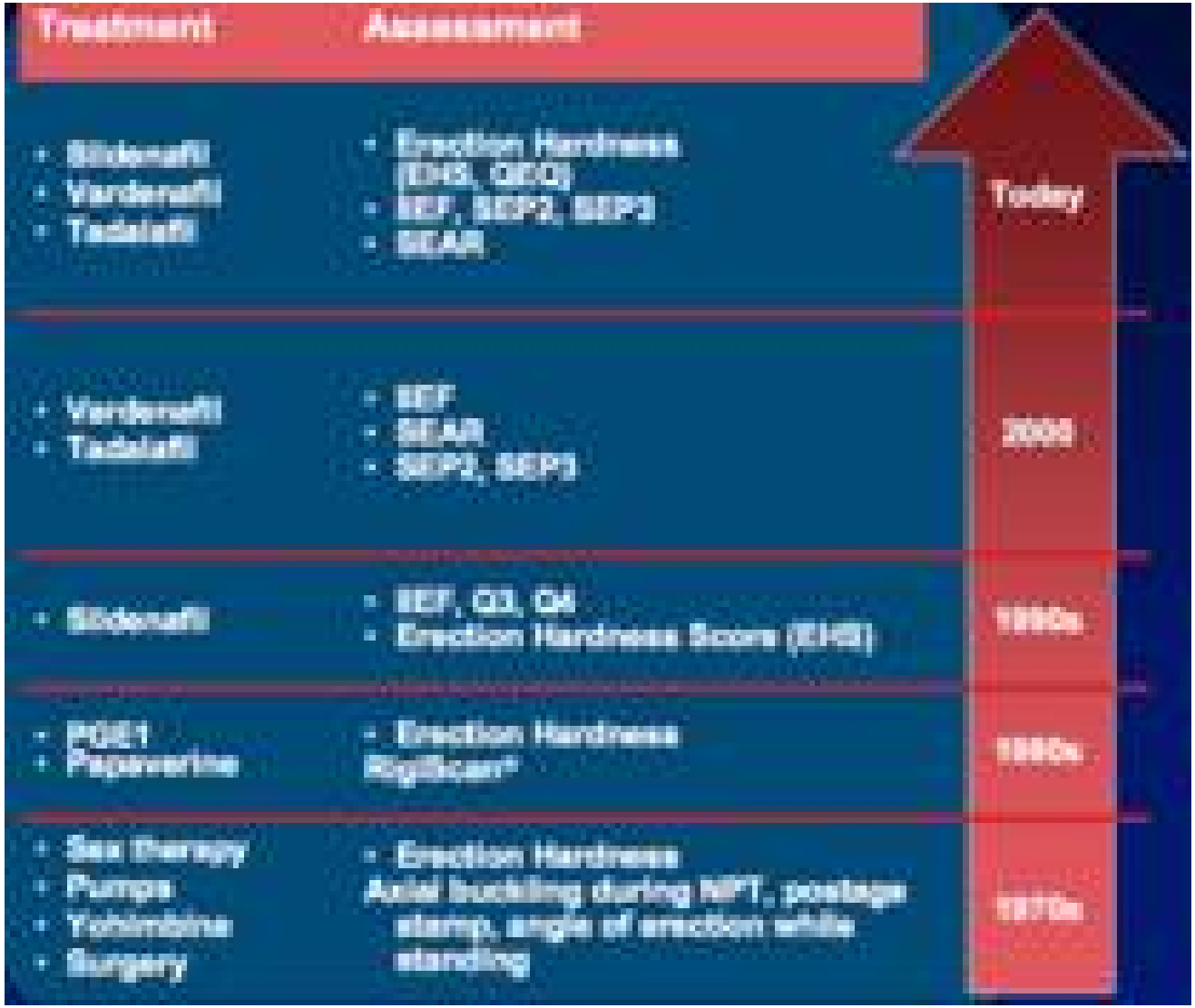
- Majoritatea barbatilor au 4-6 erectii/noapte
- Erectiile nocturne sugereaza etiologie psihogena
- In 2006
  - TTPN: medicolegal
  - Rigiscan
  - Rigiditatea bazei > 60%.


Left Shift PrtSc:8"x11"
Right Shift PrtSc:5"x7"
Screen width: 10 hrs
ID #:
Date:Sat Jan 13,1990
start time 10:34 am
Session num.: 1

Concluzii

- Evaluarea este orientata tinit
  - Investigatiile extensive sunt nenecesare marii majoritati a pacientilor
- Fiti siguri ca simtpomul principal este disfunctia erectila
- Cautati cauzele tratabile
- Evaluati factorii de risc

Tratamentul DE


Treatment
Assessment
• Sildenafil
• Vardenafil
• Tadalafil
• Erection Hardness (EHS, QEQ)
• IEF, SEP2, SEP3
• SEAR
Today
• Vardenafil
• Tadalafil
• IEF
• SEAR
• SEP2, SEP3
2000
• Sildenafil
• IEF, Q3, Q4
• Erection Hardness Score (EHS)
1990s
• PGE1
• Papaverine
• Erection Hardness
RigiScan®
1980s
• Sex therapy
• Pumps
• Yohimbine
• Surgery
• Erection Hardness
Axial buckling during NPT, postage stamp, angle of erection while standing
1970s

Schimbarea medicatie ce induce DE

- Anti HTA
  - diuretice tiazidice
  - beta blocante
  - ACEI
- Antidepresive/neuroleptice
  - triciclice
  - SSRI
  - fenotiazine
  - butirofene
- Antiaritmice
  - digoxin
  - amiodarona
  - disopiramida

Schimbarea medicatie ce induce DE

- Antihormonale
  - antiandrogeni: Cyproteronacetat
  - agonisti GnRH (leuprolide,goserelin)
  - Flutamida
  - ketoconazole
  - spironolactona
  - blocanti H2
  - cimetidina
  - estrogeni
- Droguri recreationale
  - marihuana
  - opiati
  - cocaina
  - nicotina
  - alcool

Modificarea factorilor de risc

- HTA
- DZ
- Obezitate
- Fumat
- Hiperlipemia
- Hipogonadism

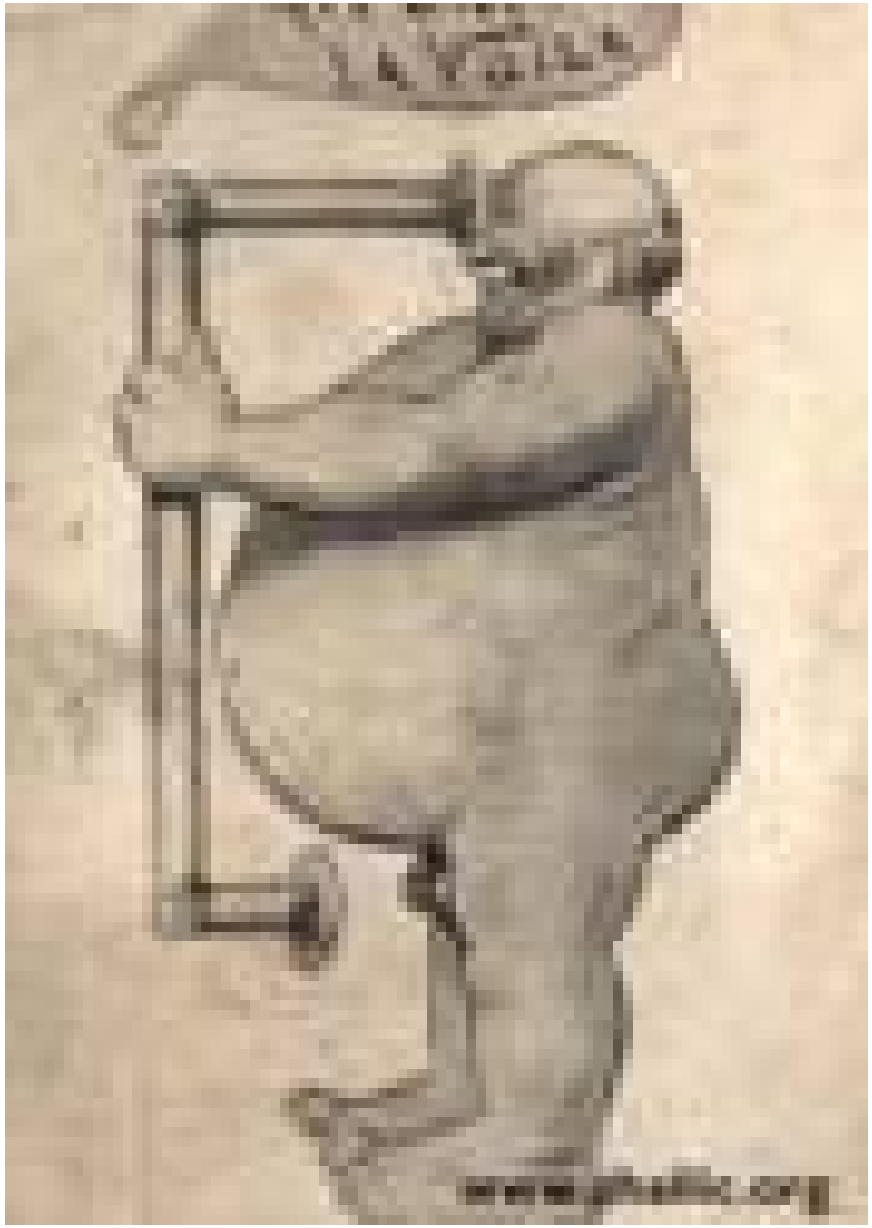
Oxford, 2009

TARGET SCHIMBARE

- TA 130/80 mm Hg
- Colesterol < 200 mg%
- HgA1c < 6%
- CA < 92 cm/104 cm

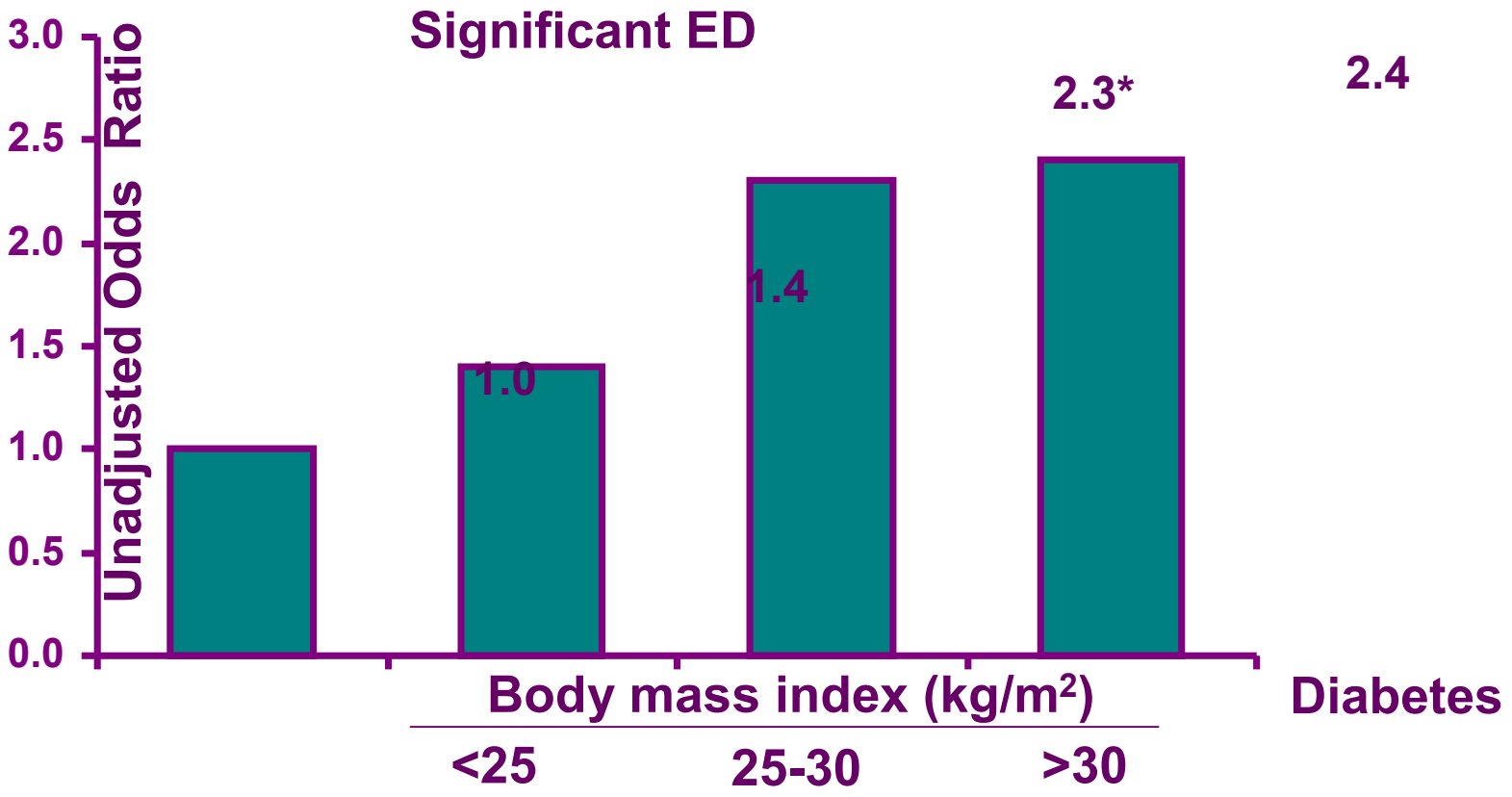
Modificarea factorilor de risc

- Hiperlipemia
  - 8/9 barbati cu hiperlipemie ca singur FDR al DE au ameliorarea erectiei cu tratament cu statine (Saltzman et al, 2004)
- HTA
  - Majoritate anti HTA deterioreaza functia erectila
  - Studiu cu Losartan (82 barbati) prevalenta DE a scazut de la 75% la 12% in 12 luni (Caro et al, 2001)
- DZ – HbA1c < 7%
- Modificarea stilului de viata



Obesitatea: Corelatie cu DE

1688 barbati; 50 - 78 ani (n = 1605 analizati)



*p < 0.05 *vs* reference group by bivariate logistic regression analyses

Deficitul partial de testosteron

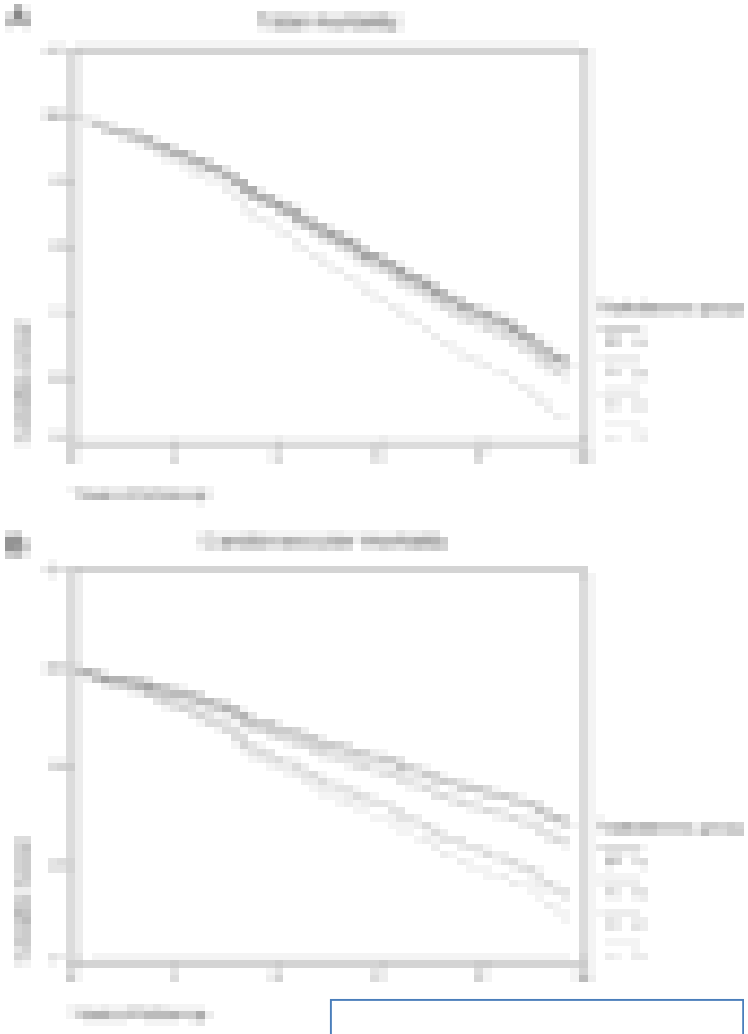
- Scaderea dorintei si a functiei erectile
- Scaderea energiei
- Reducerea starii generale de bine
- Oboseala crescuta
- depresie
- Impaired cognitionalterarea cognitiei
- Scaderea fortei si amesi musculare
- Scaderea densitatii osoaose
- Anemie

Testosteronul scazut asociat cu mortalitate crescuta

Khaw et al (*Circulation.* 2007;116:2694-2701.)

- **Figure.** Multivariate-adjusted survival by quartile group of endogenous testosterone concentrations (1 is lowest, 4 is highest) in 2314 men 42 to 78 years old in EPIC-Norfolk 1993 to 2003.

- ***Conclusions—*** In men, endogenous testosterone concentrations are inversely related to mortality due to cardiovascular disease and all causes. Low testosterone may be a predictive marker for those at high risk of cardiovascular disease.



Suplimentarea cu testosteron si DE in Mets si DZ

- **Amelioreaza insulinorezistenta**
- **Scade depozitele adipoase periviscerale**
- **Amelioreaza HbA1c (Kapoor 2006).**
- **Fara cresteri semnificative ale PSA**
- **Fara cresteri semnificative ale cancerului de prostata**

Tratament

substitutie

- T propionat/cypionat
- T undecanoat
- Transdermic T

dopaj

- Nortestosteron = nandrolon
- Stanazol
- Cidoteston
- Steroizi anabolici

- Normalizarea sub tratament a FT/TT
- Doze fiziologice

SIGURANTA – evaluare generala

- **! Evaluarea mamara (! Carcinoame nediagnosticate)**
- **Monitorizare Hematocrit ! > 50%**
- **Apneea de somn**
- **Monitorizare PSA I an trimestrial, apoi annual**

  ! Cresteri > 1/3 luni
- **Functia hepatica**

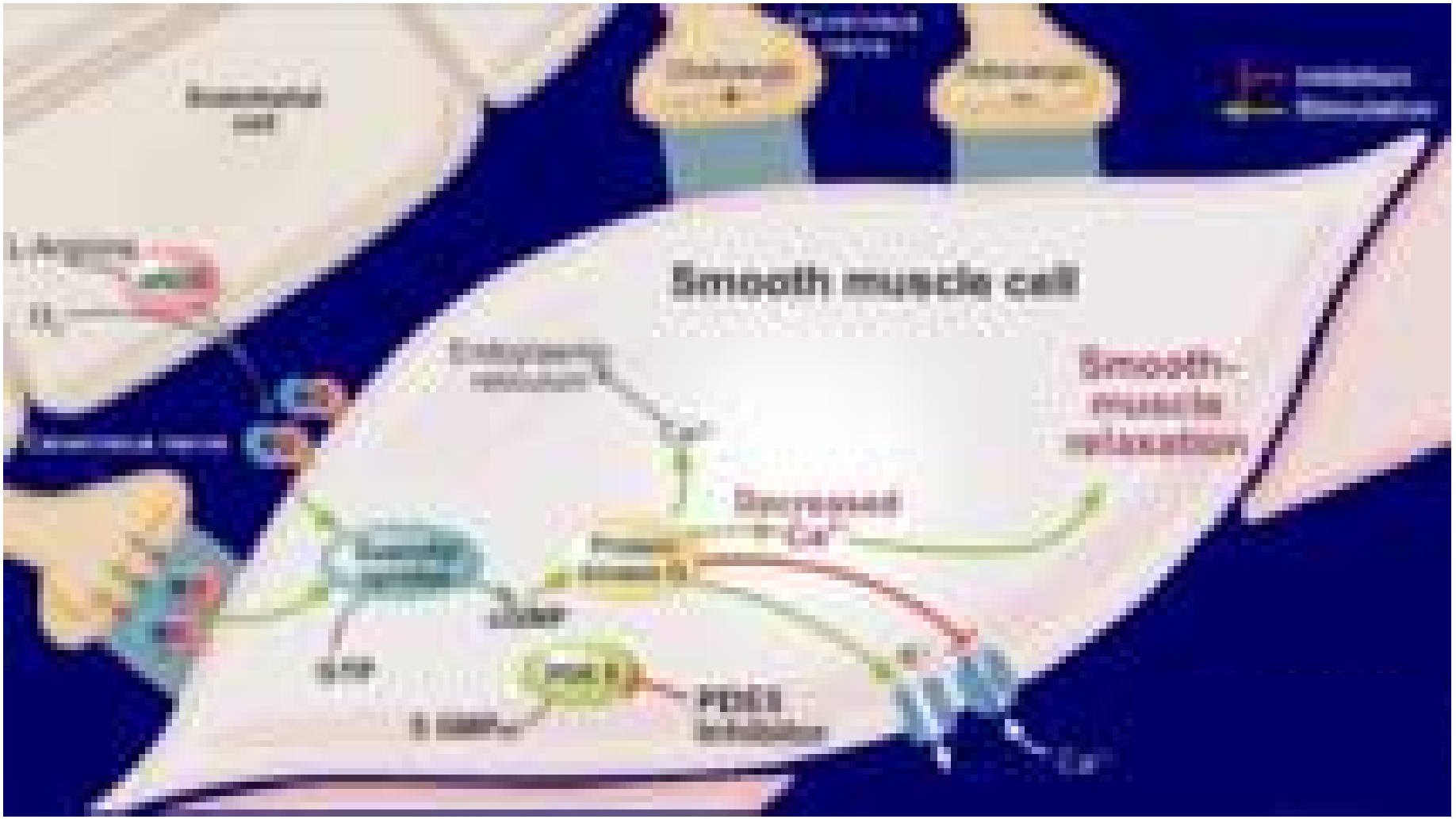
SIGURANTA PROSTATEI

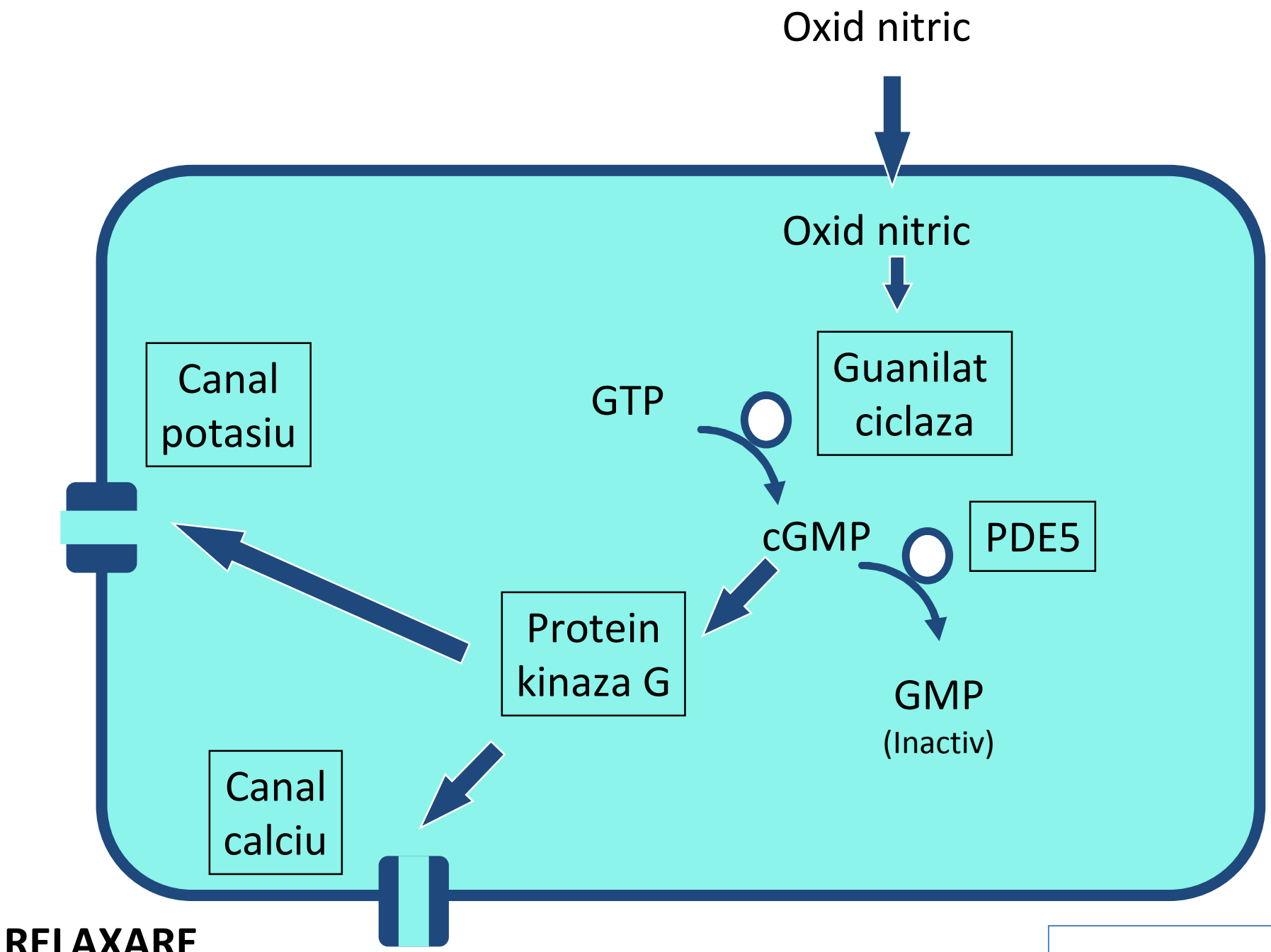
- **NU asociere intre niveul TT si riscul de CaP**
- **NU efecte protective ale deficitului de TT**
- **NU nivelele fiziologice de T cresc riscul de CaP**
- **T scade cu varsta iar incidenta CaP creste cu varata, ?! Nivelele scazute de TT contribuie la patogenia CaP, iar TT fiziologic are un efect procetiv**
- **In cazurile cu TT scazut CaP scor Gleason crescut**

Travis RC *Int J Cancer*. 2007;121: 1331
Roddam AW, *J Natl Cancer Inst*. 2008;100: 170
Prehn RT. *Cancer Res*. 1999; 59: 4161


Severe ED
Moderate ED
Mild ED
No ED
1
Penis is larger but not hard
2
Penis is hard but not hard enough for penetration
3
Penis is hard enough for penetration but not completely hard
4
Penis is completely hard and fully rigid

Inhibitorii PDE5




Oxid nitric
Oxid nitric
Canal potasiu
GTP
Guanilat ciclaza
cGMP
PDE5
Protein kinaza G
GMP
(Inactiv)
Canal calciu

RELAXARE

PDEs: Expresie tisulara

Familie	Specificitate	Expresie tisulara dominanta
PDE1	cGMP > cAMP	creier, inima, muschi neted vascular (MNV)
PDE2	cGMP = cAMP	cortex adrenal, creier, corpus cavernos (CC)
PDE3	cAMP	inima, CC, ficat, MNV
PDE4	cAMP	plaman, celule mastice, MNV
PDE5	cGMP	CC, MNV, trombocite
PDE6	cGMP > cAMP	Retina
PDE7	cAMP >> cGMP	musclhi scheletic (MS), celule T
PDE8	cAMP	Testicule, tiroida
PDE9	cGMP	foarte larg expirmate, slab caracterizate
PDE10	cGMP > cAMP	creier, testicul
PDE11	cAMP = cGMP	Testicule, inima, MS, prostata, ficat,rinichi, hipofiza

Farmacologia PDE5i'lor

Potenta si selectivitate

- Toate cele trei PDE5i sunt foarte potente
  - Vardenafil > Tadalafil = Sildenafil
  - Mici diferente intre potenta nu le afecteaza eficacitatea
- Toate trei PDE5i sunt selective
  - La doze foarte mari sildenafil inhiba PDE6
    - Efecte vizuale la doze mari
  - La doze mari tadalafil inhiba PDE11
    - Fara efecte secundare definite

Pharmacologia PDE5i'lor

Pharmacocinetica

	Sildenafil	*Vardenafil*	*Tadalafil*
Tmax (hrs)	1.16	0.66	2.0
T1/2 (hrs)	3.82	3.94	17.5

NB Toate medicamentele sunt active inainte de Tmax

PDE5i: cinetica

	Inceperea actiunii				Durata actiunii	
	Populatie	% cu erectie dupa 20 minute dupa medicament	% cu erectie dupa 20 minute de la placebo	Interactiunea cu alimentele	Sfat despre actul sexual	Fereastra extinsa de tratament
Sildenafil	Sildenafil responders	51%	30%	DA	In 4 ore	Posibil pana la 12 ore
Tadalafil	General	20%	11%	Minora	36 de ore	Se poateextinde pana la 48ore
Vardenafil	General	46%	23%	Doar mese foarte bigate	4 ore	Uneori oana la 12 0re

* non-responders la PDE5i au fost exclusi

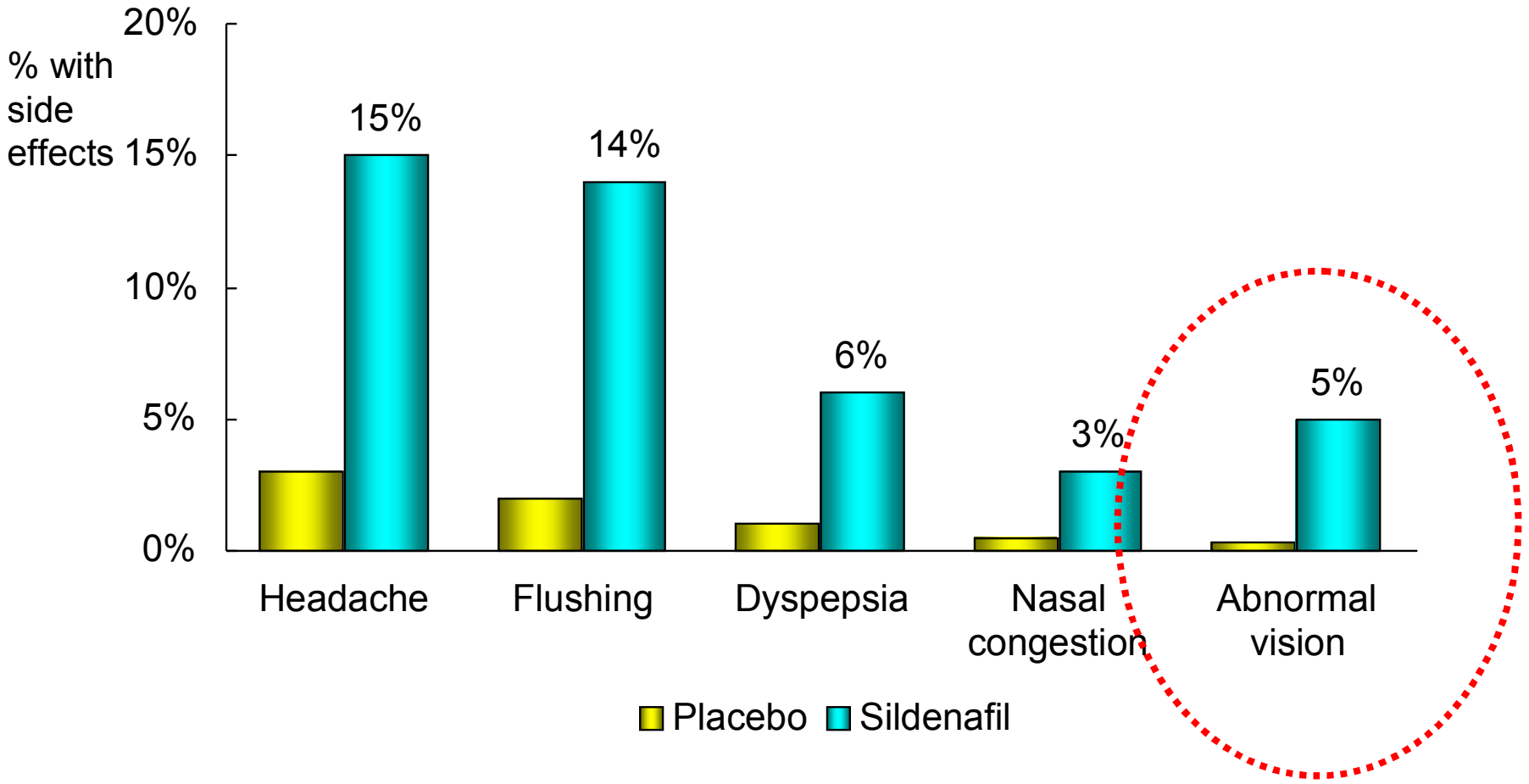
PDE5i: Eficacitate

	Eficacitate Act sexual cu succes *(SEP3 rate)* (ameliorarea fata de raspunsul bazal)	
	Populatia generala	DZ
Sildenafil	69% (+57%)	59% (+45%)
Tadalafil	68% (+46%)	48% (+29%)
Vardenafil	68% (+53%)	54% (+39%)

Goldstein et al, NEJM, 1998
Hatzichristou et al, Eur Urol, 2003
Carson et al, BJUI, 2004
Boulton et al, Diabet, 2001
Saenz de Tejada et al, Diabet Care, 2004
Goldstein et al, Diabet, 2003

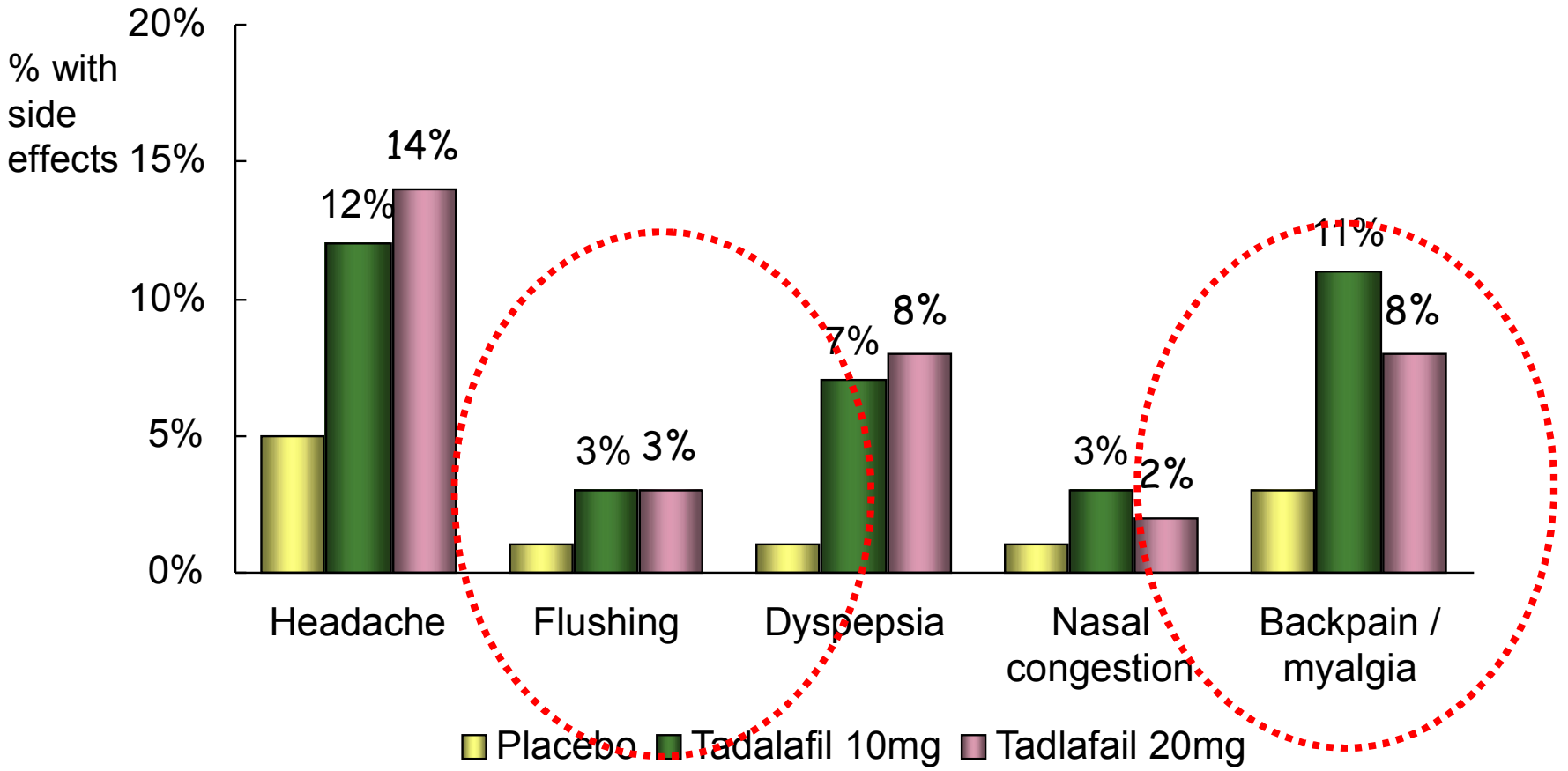
Sildenafil

Profil efecte secundare



Morales et al, IJIR, 1998

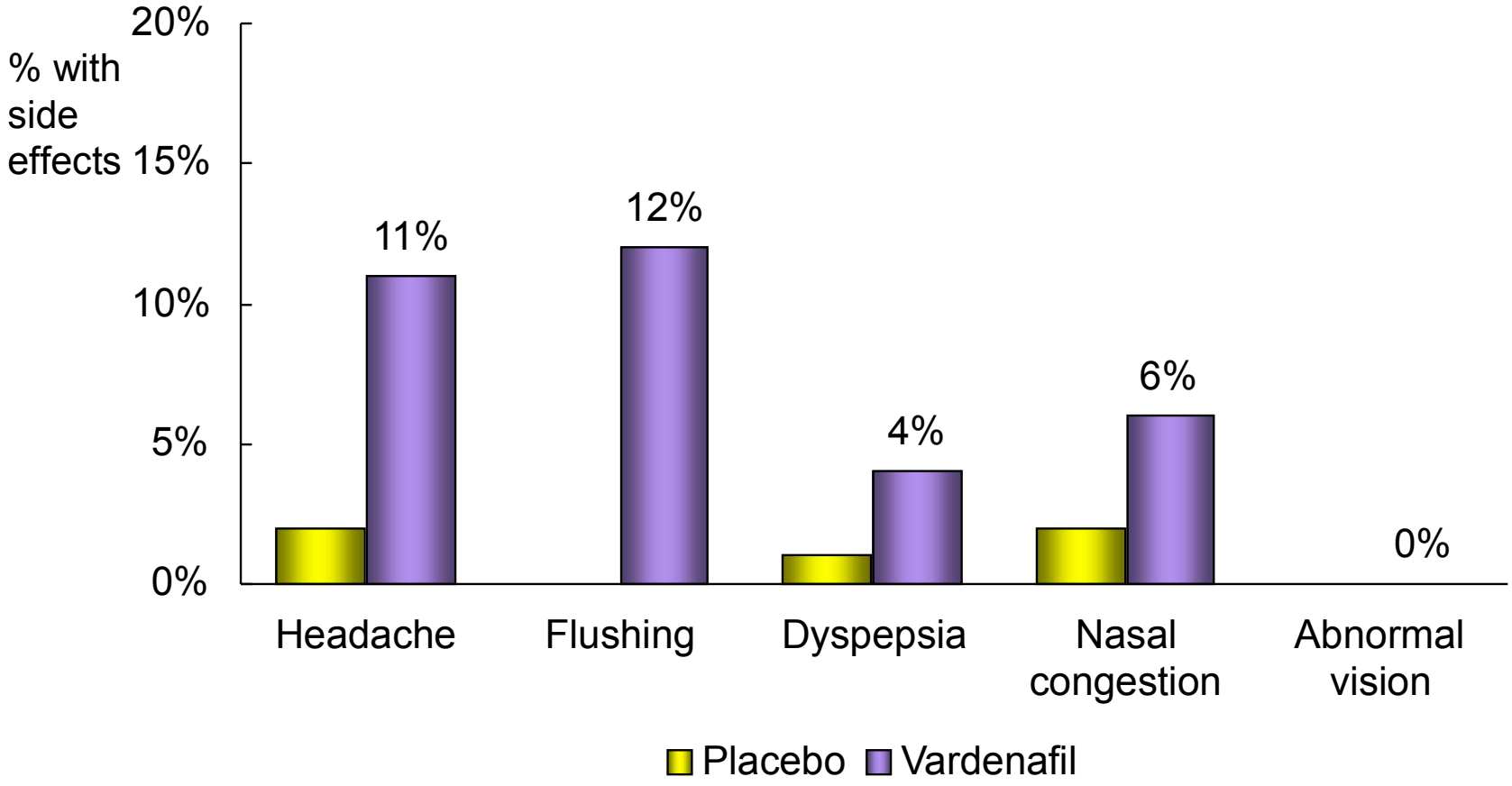
Tadalafil
profil efecte secundare



Carson et al, BJUI, 2004

Vardenafil

profil efecte secundare



Hatzichristou et al, 2003

Alegerea PDE5i

- Cele 3 PDE5i au efecte similare pe eficacitate si tolerabilitate
- Cinetici diferite
- Pacientii ajung sa se gandeasca la obiceiurile sexuale
- Aleg dintre cele trei acela care I se potriveste mai bine dpdv al ritmului vietii sexuale

Aspecte practice

Alegera pacientilor: Informarea pacientilor

- Aspecte generale
  - Stimulare sexuale
  - Interval dintre administrare si act sexual
  - Efecte secundare
  - Nitrati si alpha blocanti
- Efecte adverse
  - Timing –ul administrarilor
  - Durata de actiune
  - Interactiunile cu mancarea
  - Interactiunile cu medicamente

SIGURANTA

- Orice poate urca 2 etaje de bloc fara dispnee
- Nu administrare consomitenta de Nitrati alphablonati (BPH)
- Nu determina dependenta
- Nu determina MS

NIVEL DE EFORT

- Activitate sexuala in cuplu stabil 2.5-4 METS
- Cuplu nou/relatie ocazionala - 6 METS
- METS = kcal/kg/ora
- Echivalentul consumului energetic necesare statului in scaun.
- 1 MET = consumul de oxigen (ml/kg/min) necesar statului in scaun = 3.5 ml/kg/min.

ADMINISTRARE

- Orala
- Inainte de contact sexual
- Functioneaza in conditiile STIMULARII SEXUALE
- PERMITE MAI MULTE ERECTII

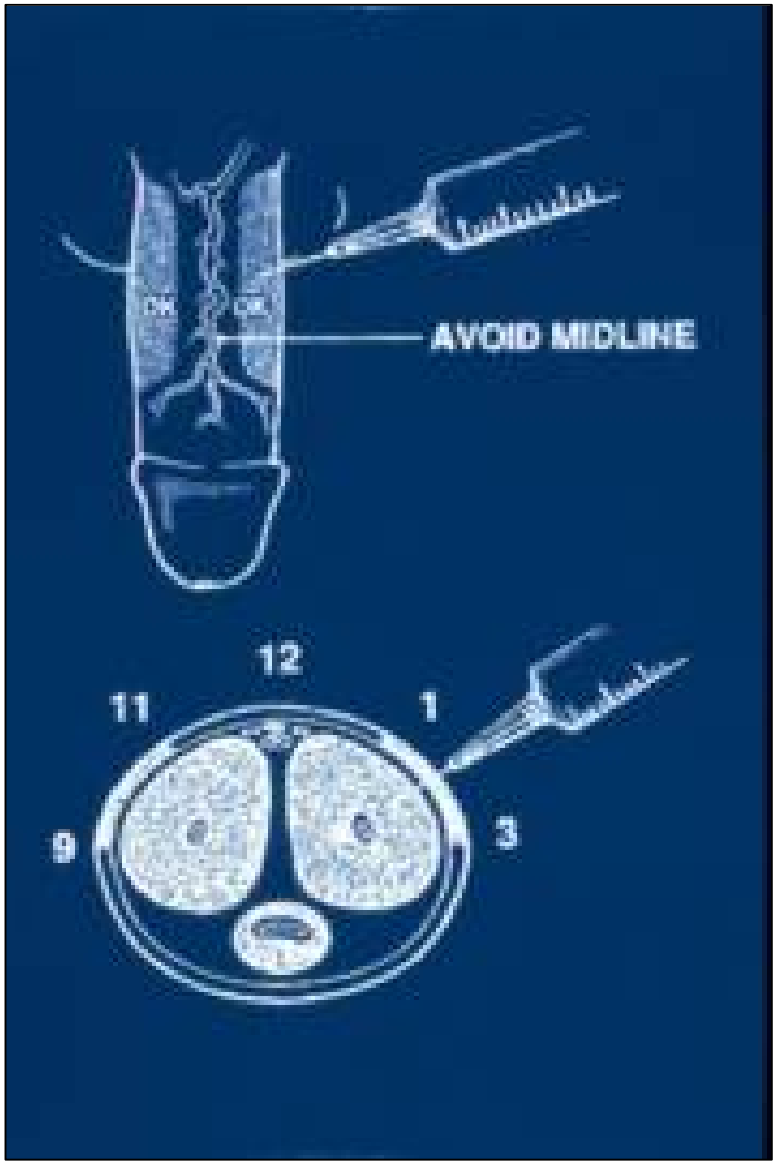
- **! REGULA CELOR 10 DOZE**
  - Incredere
  - Dispare conduita de esec
  - Dispare comportamentul evitant
  - Satisfactie
  - Recastigarea unui anumit ritm sexual in cuplu

Tratamente non orale ale DE

- Injectabil
- Intrauretral
- Dispozitive cu vacuum
- Chirugie

Tratamentul injectabil al DE

Administrare intracavernoasa



Tratament injectabil intracavernos

Oxford, 2009

- **PGE1**
- **Papaverina**
- **Fentolamina**
- **BIMIX = Papaverina + Fentolamina**
- **TRIMIX = Papaverina + Fentolamina + PGE1**

REGULI DE ADMINISTRARE

- Utilizarea dozei minim eficiente
- Maxim 3/saptamana
- ! La erectie mai lunga de 4 ore
- Intotdeauna se citesc informatiile

Succesul terapei intracavernoase

- Papaverina 50%
- Papaverina + Phentolamina 70%
- PGE1 75%
- Trimix 80%
- VIP + Phentolamine ???

Complicatii

- Erectii prelungite
- durere (PGE1)
- Fibroza
- mancarime
- Flushing (VIP)
- Hipotensiune
- Sangerare uretrala

Probleme speciale

- Post priapism
- Sickle cell disease
- Hipercoagulabilitate
- Boala Peyronie’s
- Anticoagulante

Injectii intracavernoase: Drop-out

- Tipic doar 25-50% din barbati se mai injecteaza dupa 2-3 ani
- Cauze pentru drop-out
  - Erectii spontane
  - Nemultumirea pacientului
  - Nemultumirea partenerei
  - Pierderea eficacitatii
  - Schimbari in relatie
  - Boli asociate

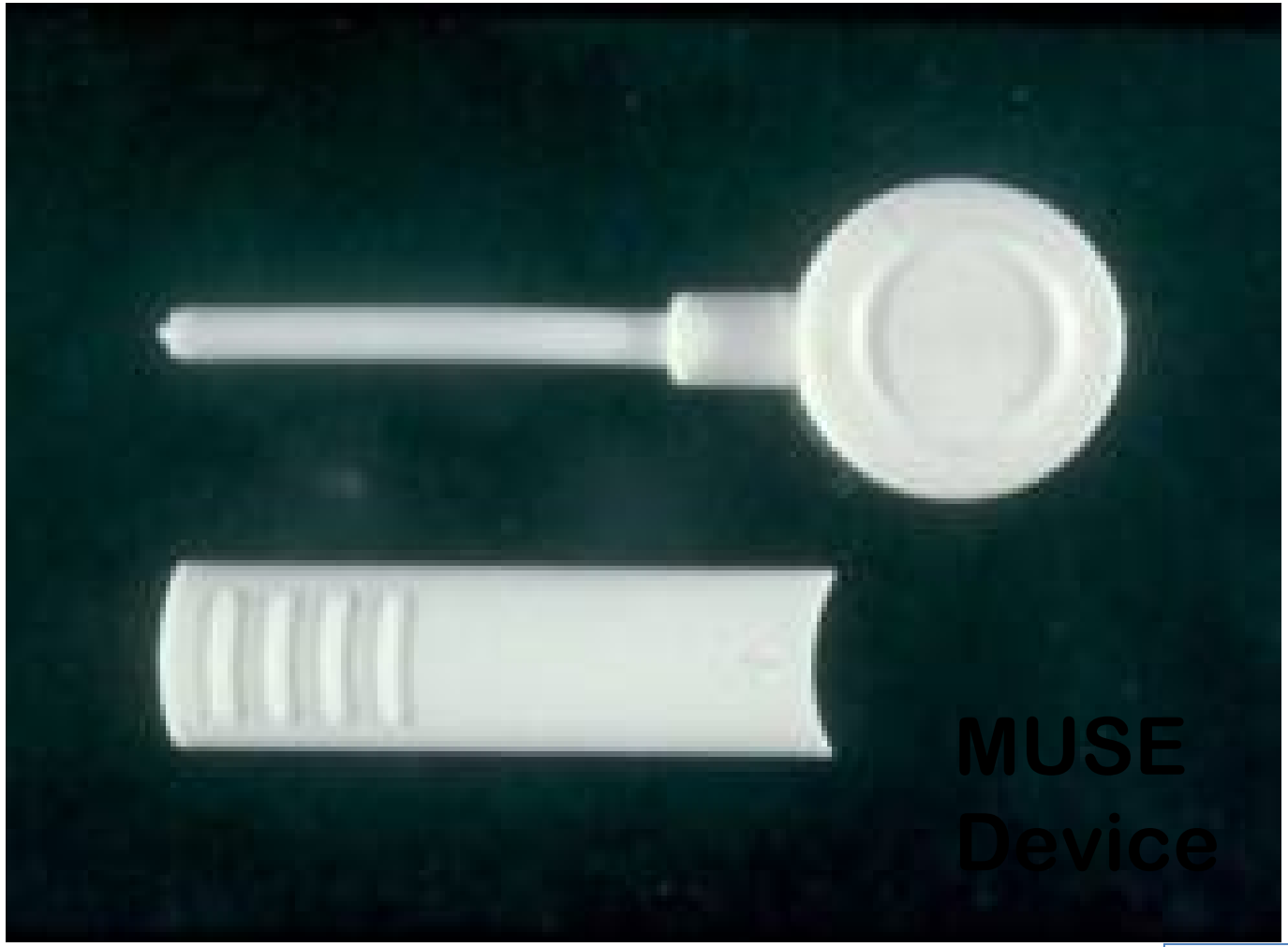
Tratamentul intracavernos

PRO'S
- Efectiv
- Rigiditate
- Siguranta
- Complicatii putine

CON'S
- Lipsa totala a spontaneitatii
- Invazivitate
- Complicatii severe
- Rata mare de renuntare
- scumpa

Terapie de linia a doua, doar la pacientii nonresponderi la PDE5 i

Terapia intrauretrala



MUSE: Tehnica
Medical Urethral System for Erection

- Urinare inainte de administrare
- Masarea pensiului
- Plimbare
- Inel de constrictie peniana

Efficacitatea MUSE

- 30-50% raspuns pozitiv
- Doze: 500 - 1000 μgs
- Nu exista predictori clari ai raspunsului
- Bine tolerat

Tratament intrauretral

PRO

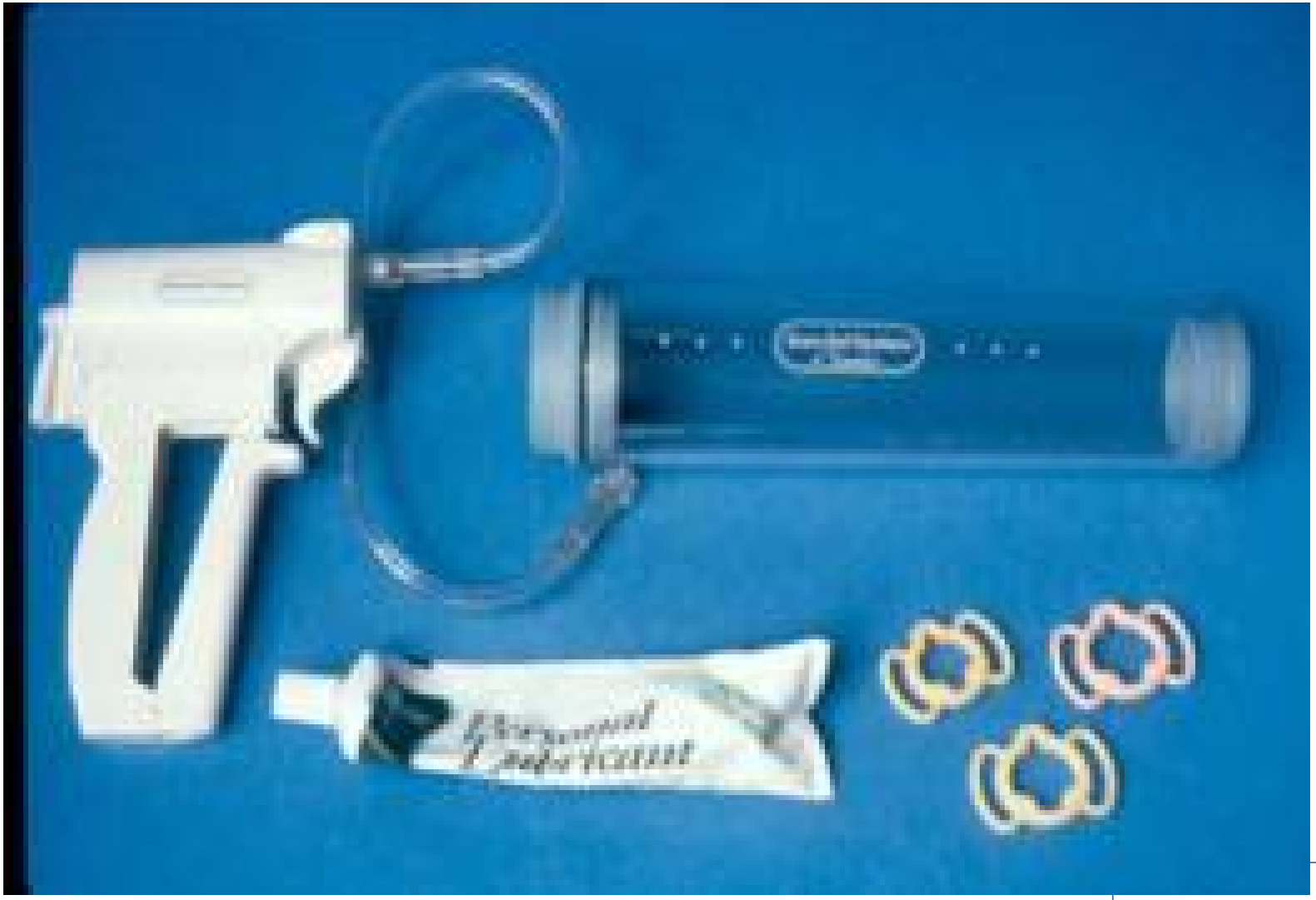
- Lipsa complicatiilor majore
- Acceptabilitate versus injectii

CONTRA

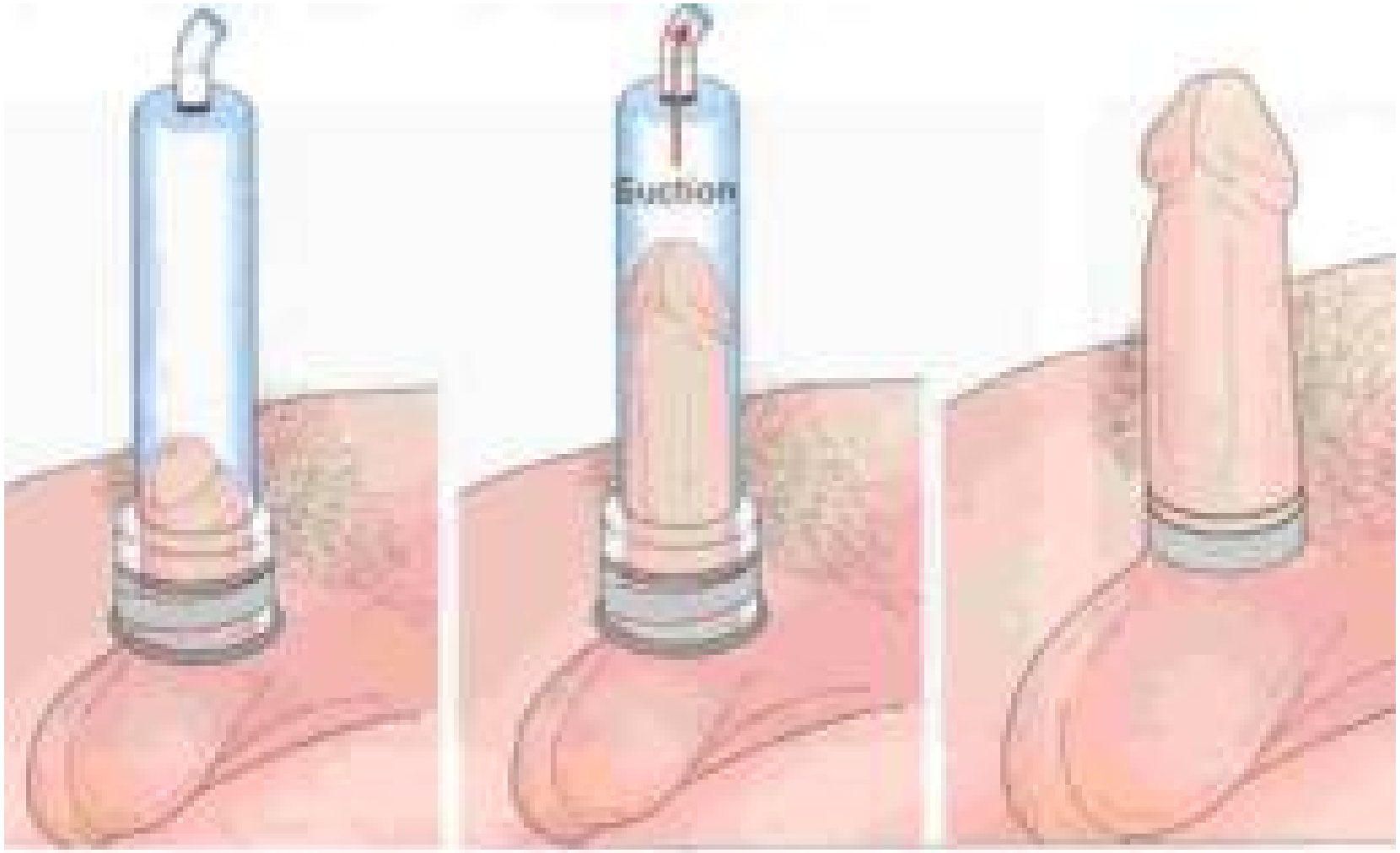
- Lipsa de spontaneitate
- Invaziv
- ? eficacitate
- Rata mare de renuntare
- scump

Nu este clar daca este o alternativa la nonresponderii terapiei orale

SISTEME MECANICE VACUUM



SISTEME MECANICE VACUUM



:Mecanism de actiune

- Putin inteles
  - Mentinerea fluxului arterial
  - Diminuarea efluxului venos (inel)
  - Se aspira sange
  - !! Corpul cavernos este contractat NU DILATAT
- Erectia care rezulta nu este “normala”
  - Temperatura peniana mai redusa (erectie rece)
  - Aspect usor cianotic
  - Erectia este doar pana la nivelul inelului de constrictie

VEDs

PRO

- Potential efectiva la toti pacientii
- Non-invaziva
- Rata scazuta a complicatiilor
- Nu este limitata de o anumita freventa de utilizare

CONTRA

- Dexteritate manuala
- Calitatea erectiei
- Efecte secundare
  - Baza peniana pivotanta
  - culoarea
  - Temperatura
  - Senzatia de iritare
  - Poate bloca ejacularea
- Costul

MEDICAMENTE DE VIITOR

- Agonisti receptori melanocortina (periferic)
- Oxitocina (DE psihogena)
- Agonsiti Serotonina (5 HT)
- Glutamat
- Analogi Hexarelina
- Alti PDE5 I : AVALAFIL eficacitate la 20 minute, scazuta la 100 min
- Alprostadil topic (ALPROX)
- Terapie genica

TRATAMENTUL CHIRURGICAL AL DE

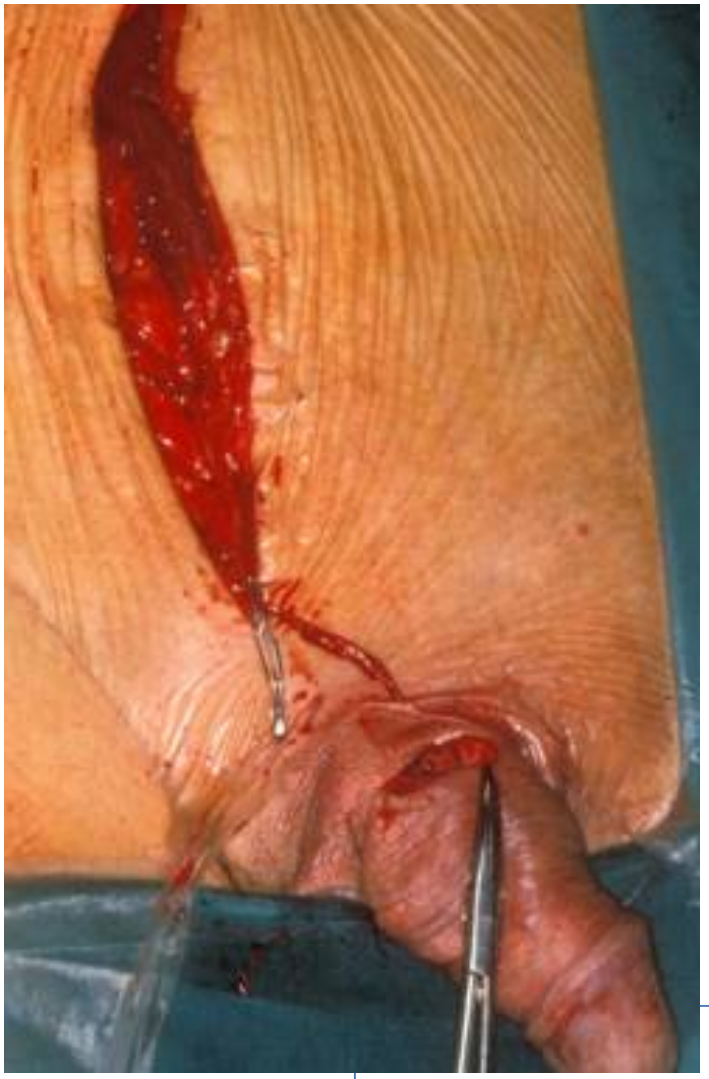
- Chirugie vasculara
  - Revascularzatie peniana
  - Ligatura venoasa
- Proteze peniene

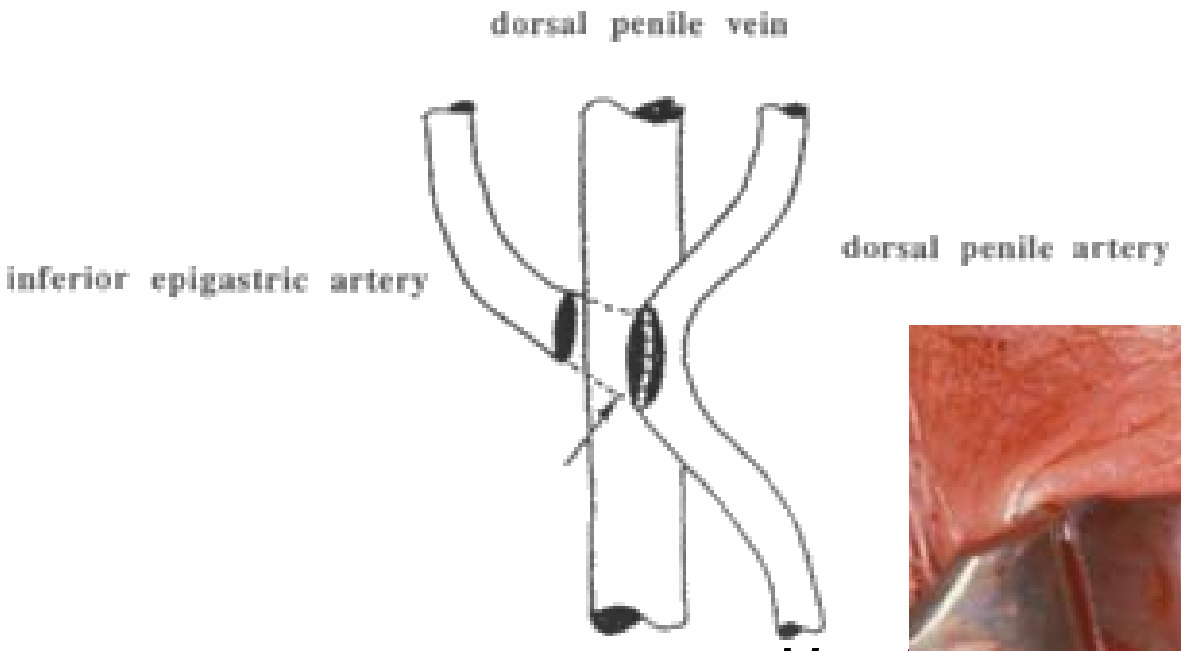
? MOMENTUL

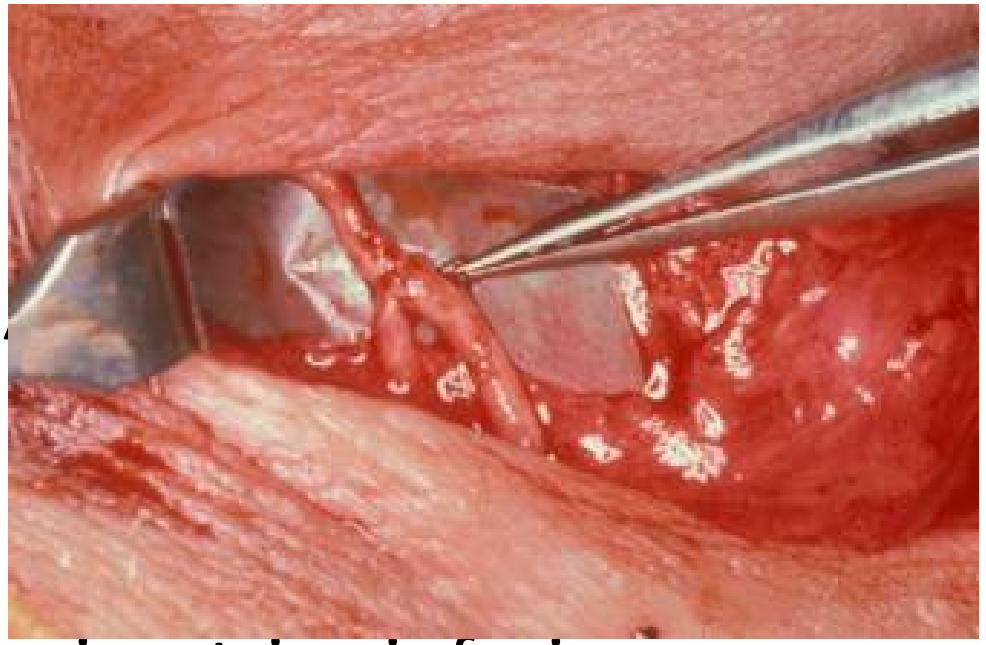
- I linie - minim invaziva
  - –Sildenafil (ViagraTM)
  - –Tadalafil (CialisTM)
  - –Vardenafil (LevitraTM)
- Raspusn negativ Linia a IIa invaziva
  - –injectii intracavernoase
  - –VDC
  - –agenti intrauretrali
- Raspuns negativ linia a III-a

Principii revascularizatie peniana

- Aduce sange extraaterial, din surse externe
- Uzual artera epigastrica externa
- Ocazional artera femurala
- Anastomoza cu artera/vena peniana







- Anastomoza a arterei epigastrice inferioare, venei dorsale a penisului si arterei dorsale

DE VENOGENA

- 1980 •identificarea venelor emisare
  - •identificarea RX a scurgerii venoase
  - • ligatura venoasa
  - •progresiv atitudine chirurgicala agresiva

- 1990 •rolul FMN in mecanismul venoocluziv
  - •rezultate slabe ale ligaturii venoase
  - •renuntarea la aceasta procedura

Proteze peniene

1. lipsa de răsuns al medicației
   - Corpi cavernosi fibrosi
   - Peiredrea musculaturii cavernoase: DE arteriogenă
   - Alterarea functionalitatii musculare:DZ

2. Boala Peyronie
3. Postfalopastie
4. La cerere

Proteze peniene: Istoric

- 1936 cartilaj costal (Bogoras)
- 1952 implant acrilic (Scardino)
- 1960s polietilena
- 1973 gonflabil (Scott)
- »cilindrii de silicon gonflabili
- 1976 Semi-rigid (Small-Carrion)
- »proteze pline de silicon
- 1977 proteze rigide (Finney)
- »silicon doar in portiune medie
- 1978 sarma de argint (Jonas)

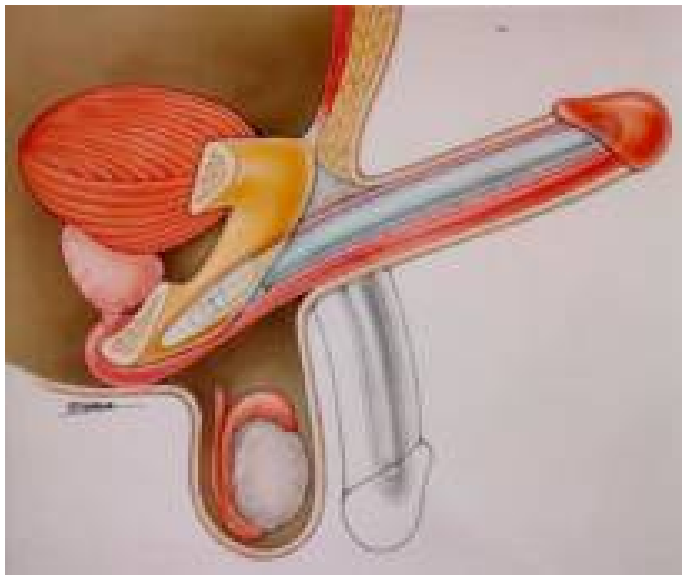
ford, 2009

URMARI

- Distrugerea țesutului erectil
- Scăderea lungimii peniene
- Posibilitatea penetrarii Uduritate dar nu erecție)
- Lipsa oricarei senzatii tactile
- Lipsa erectiei spontane (tumescentei vasculare)
- ? Plăcere centrală / periferică

Semi-Rigid Prostheses

- Cheap (£600-£800)
- Easy to insert
- Relatively poor “concealabili
- Relatively good durability



Oxford, 2009

Multi-Piece Inflatables

- •Expensive (Over £3000)
- •Complex insertion
- •Excellent concealability
- •Best “erections”
- •“Moving parts”

Multi-Piece Inflatables

- AMS 700CX
- –Girth expands 12-18mm
- –No change length
- •AMS 700CXM
- –Girth expands 9.5-14.2mm
- –No change in length
- •AMS Ultrex
- –Girth expands 12-18mm,
- –Increase in length