Mens Health
INTERNATIONAL
SURGICAL CENTER
SWITZERLAND

5th Emirates International
UROLOGICAL
Conference

Erectile Dysfunction and Penile Implant:

« The Best Solution for the Worst Situation »

by Daniel Chevallier (MD, PHD, FEBU, FACS-EI)

www.mhisc.ch

Men's Health International Surgical Center - Place des Philosophes 18, 1205 Geneva Switzerland

Guidelines
EAU
2010

Guidelines on

Male Sexual Dysfunction:

Erectile dysfunction and premature ejaculation

E. Wespes, E. Amar, I. Eardley, F. Giuliano, D. Hatzichristou,
K. Hatzimouratidis, F. Montorsi, Y. Vardi

3.9 Third-line therapy (penile prostheses)

The surgical implantation of a penile prosthesis may be considered in patients who do not respond to pharmacotherapy or who prefer a permanent solution to their problem. Two types of prosthesis exist: malleable (semi-rigid) and inflatable (two- or three-piece).

Most patients prefer the three-piece inflatable devices due to the more 'natural' erections obtained. However, the two-piece inflatable prosthesis can be a reliable option with fewer mechanical complications and is easier to implant. A semi-rigid prosthesis provides a constantly rigid penis and may be suitable in older patients with infrequent sexual intercourse (132). The inflatable prosthesis is much more expensive. In several countries, patients are reimbursed for the cost of the prosthesis provided the ED has an organic cause and the patient has undergone a complete impotence assessment.

Prosthesis implantation has one of the highest satisfaction rates (70-87%) among treatment options for ED based on appropriate consultation (133-137).

Summary of the Recommendations on Sexual Dysfunctions in Men

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Francois Giuliano, MD, PhD,§ Saad Khoury, MD,¶ Tom F. Lue, MD,** Ira Sharlip, MD,**
Stanley E. Althof, PhD,†† Karl-Eric Andersson, PhD,‡‡ Gerald Brock, MD,§§ Gregory Broderick, MD,¶¶
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Ian Eardley, MD,¶¶¶ Kerstin S. Fugl-Meyer, PhD,**** Irwin Goldstein, MD,†††† Geoff Hackett, MD,‡‡‡‡
Dimitris Hatzichristou, MD,§§§§ Wayne Hellstrom, MD,¶¶¶¶ Luca Incrocci, MD,*****
Graham Jackson, MD,††††† Ates Kadioglu, MD,‡‡‡‡‡ Laurence Levine, MD,§§§§§ Ronald W. Lewis, MD,¶¶¶¶¶
Mario Maggi, MD,****** Marita McCabe, PhD,†††††† Chris G. McMahon, MD,‡‡‡‡‡‡
Drogo Montague, MD,§§§§§§ Piero Montorsi, MD,¶¶¶¶¶¶ John Mulhall, MD,******* Jim Pfaus, PhD,†††††††
Hartmut Porst, MD,‡‡‡‡‡‡‡ David Ralph, MD,§§§§§§§ Raymond Rosen, PhD,¶¶¶¶¶¶¶
David Rowland, MD,******** Hossein Sadeghi-Nejad, MD,†††††††† Ridwan Shabsigh, MD,‡‡‡‡‡‡‡‡
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Marlene Wasserman, MD†††††††††

Penile Prosthetic Surgery For ED. A patient would currently be considered a good candidate for a penile prosthesis if he had failed medical therapy or if medical therapy were contraindicated and the other therapies (e.g., penile injections, intraurethral therapy, VCDs) have also failed or do not satisfy the patient. Patients who eventually opt for an implant are usually highly motivated to continue with sexual activity.

J Sex Med 2010;7:3572–3588

Table 2. Characteristics of Currently Available Prostheses

	AMS	Coloplast
Malleable	Spectra	Genesis
	Alternating titanium and polyethylene segments	Hydrophilic coating
	MRI conditional	Lengths = 12, 14, 16, 18, 20, 22, 24 cm
	Lengths = 12, 16, 20 cm	Diameters = 9.5, 11, 13 mm
	Diameters = 9.5, 12, 14 mm	
2-piece IPP	Ambicor	
	Parylene coating	
	Reservoir contained in pump	
	Lengths = 14, 16, 18, 20, 22 cm	
	Diameters = 12.5, 14, 15.5 mm	
3-piece IPP	All devices	All devices
	Momentary Squeeze	Hydrophilic coating
	Parylene coating	Bioflex material
	Inhibizone	Titan NB
	700 CX	Narrow base
	Lengths = 12, 15, 18, 21, 24 cm	Lengths = 12, 14, 16, 18, 20, 22 cm
	Dilation $\geq$ 12 mm recommended	Dilation $\geq$ 10 mm recommended
	700 CXR	Titan OTR
	Narrow base	Hydrophilic coating
	Lengths = 10, 12, 14, 16, 18 cm	0° tubing
	Dilation $\geq$ 10 mm recommended	OTR
	700 LGX	Lengths = 12, 14, 16, 18, 20, 22, 24, 26, 28 cm
	Lengths = 12, 15, 18, 21 cm	Dilation $\geq$ 12 mm recommended
	Increases in girth and length	
	Dilation $\geq$ 12 mm recommended	
Reservoirs	Spherical	Clover Leaf CL
	65 and 100 mL	75 and 125 mL
	Conceal	Lockout valve incorporated
	100 mL	
	Flat profile optimal for submuscular abdominal wall placement	

AMS = American Medical Systems; IPP = inflatable penile prosthesis; MRI = magnetic resonance imaging; OTR = one-touch release.


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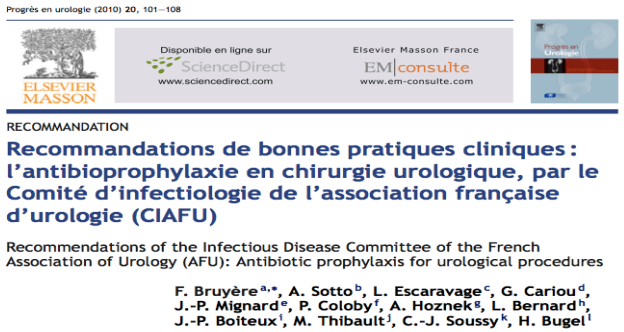
Guidelines
Patient preparation

No active infection : systemic, cutaneous or urinary

http://www.auanet.org/education/guidelines/erectile-dysfunction.cfm

In France

- Clipping D Day (or depilatory cream D-2) (Avoid Razor)
- Betadine showers : 2 D-1 and D-Day
- Antibioprophylaxy : Cefazoline 2 G 30-60 mn before incision (slow IV) and 1 G if > 2 hours



Antibiotic Patterns with Inflatable Penile Prosthesis Insertion

Matthew S. Wosnitzer, MD and Jason M. Greenfield, MD

Department of Urology, Columbia University Medical Center, New York, NY, USA

- IV Antibiotics : 100%
  - Cefazoline
  - Vancomycine
  - Ampicilline
  - Gentamycine
- Post-op treatment 88% , mean 1 week with quinolones

- Local Antibiotics: 100%
  - Aminosides
  - Cefazoline
  - Bacitracine
  - Rifampicine
  - Polymixine
- Skin preparation duration >10 mn : 66%

J Sex Med 2011;8:1521–1528

Perioperative Prevention of Penile Prosthesis Infection: Practice Patterns among Surgeons of SMSNA and ISSM

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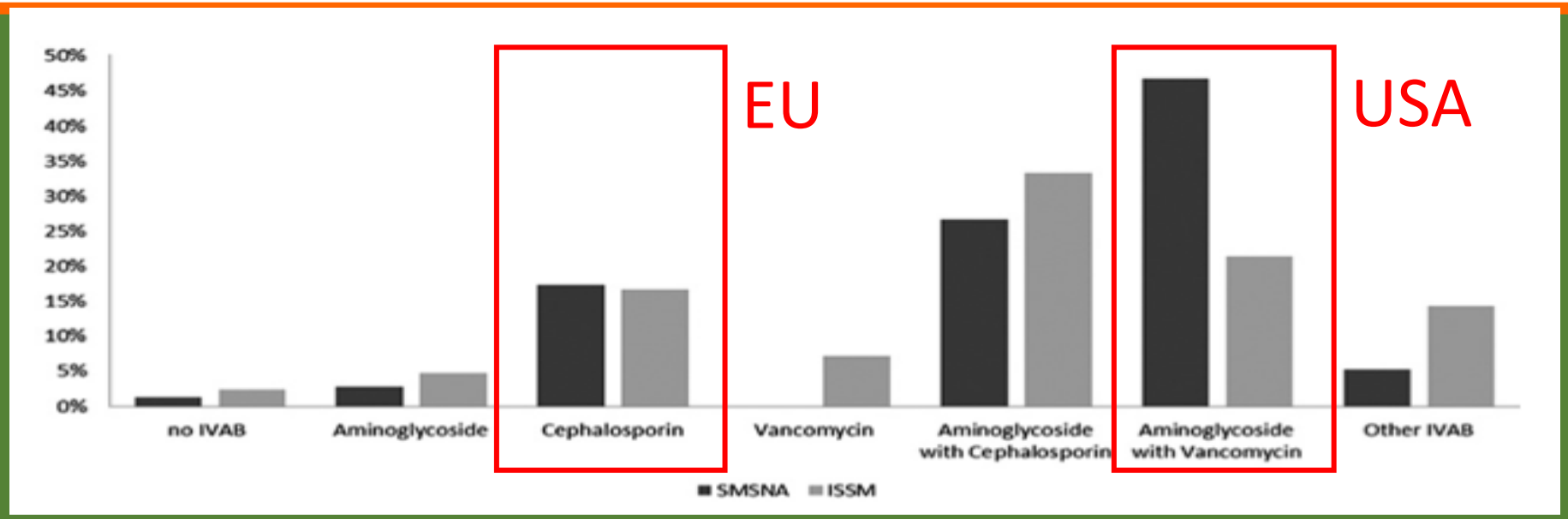
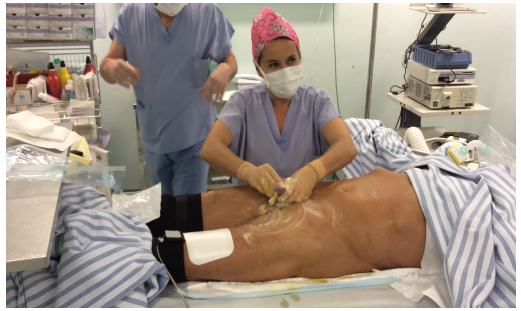
DOI: 10.1111/j.1743-6109.2012.02724.x



no evidence within to support the use of antibiotics beyond the 24-hour period

Wolf JS, Bennett CJ, Dmochowski RR, Hollenbeck BK, Pearle MS, Schaeffer AJ. Best practice policy statement on urologic surgery antimicrobial prophylaxis. 2008. AUAnet.org. Available at: http://www.auanet.org/content/media/antimicroprop08.pdf (accessed April 16, 2012).



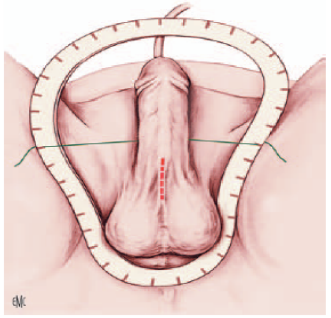
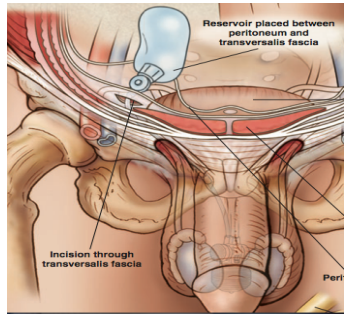
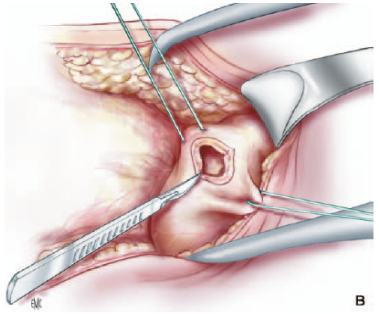
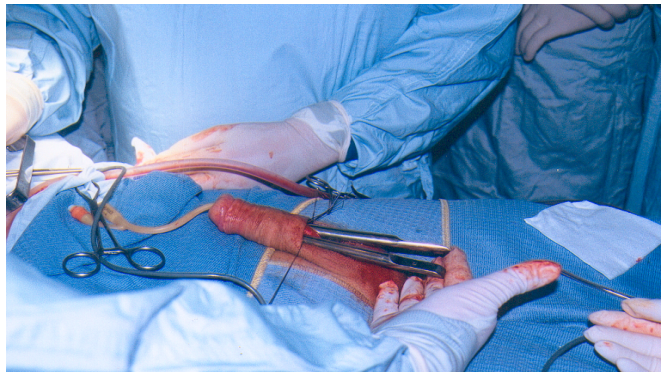
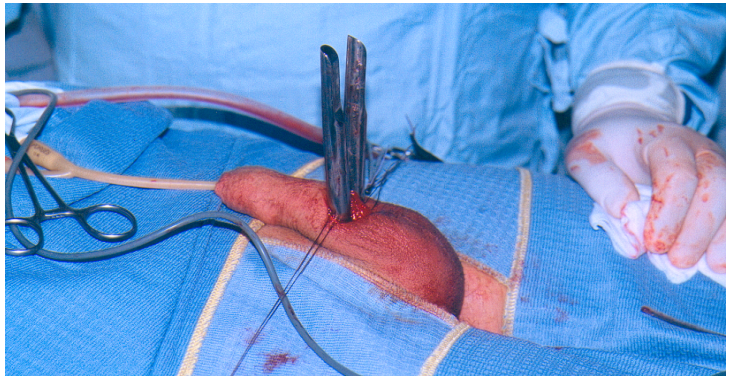


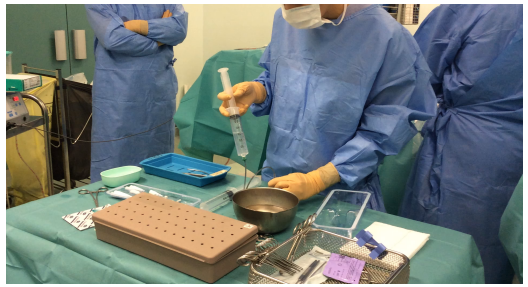
Figure 11. Cadre de Scott.

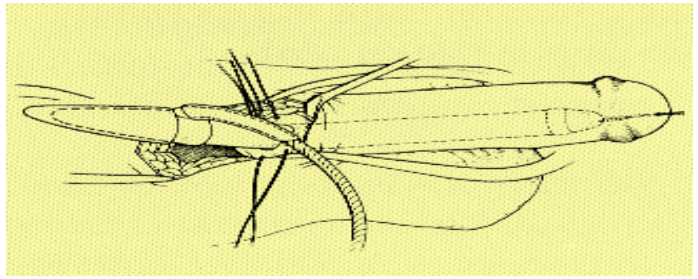


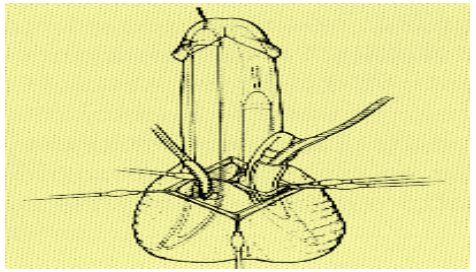












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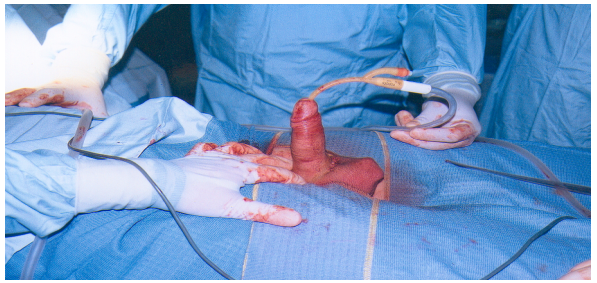
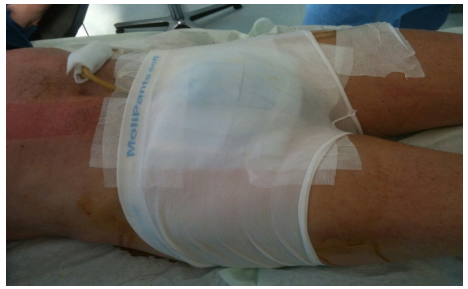




IPP Follow up

3 GOALS to reach

Low Infection Rate
Low Mechanical Failure Rate
High Satisfaction Rate

Infection Rate and IPP
The Coated Implants Revolution

- 2001 : Inhibizone (Rifampicine+ Minocycline) 1,61 % à 0,68%

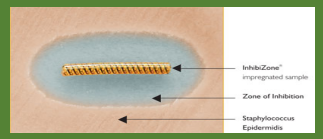
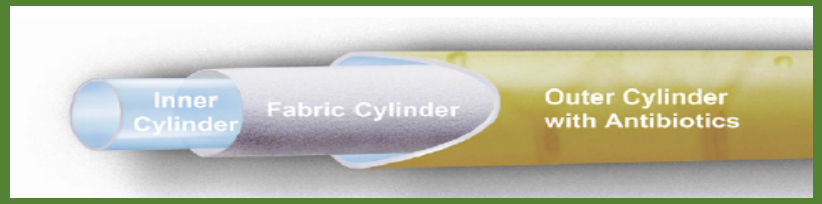


TABLE 5. *In vitro inhibition zones for device samples with InhibiZone treatment*[17]

Organism	Mean (mm)
S. epidermidis	22.6
S. aureus	17.5
Escherichia coli*	6.5
E. faecalis*	4.8
P. mirabilis*	0.6
C. albicans*	0.1

Each isolate was tested as 5 replicates and device samples were standardized kink resistant tubing test samples containing minocycline and rifampin.
* Isolates were not susceptible to rifampin and/or minocycline control disks.

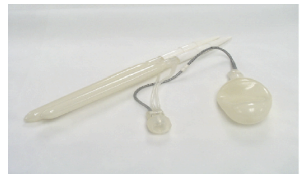


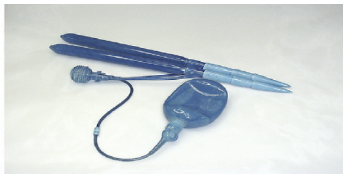
Carson CC 3rd. Efficacy of antibiotic impregnation of inflatable penile prostheses in decreasing infection in original implants. J Urol 2004;171: 1611–4.

- 2002 : Hydrophilic coating PVP (PolyVinylPyrolidone) 2,07 % à 1,06

Wolter CE, Hellstrom WJ. The hydrophilic-coated inflatable penile prosthesis: 1-year experience. J Sex Med 2004;1:221–4.

Infection Rate and IPP
The Coated Implants Revolution





Long-Term Revision Rate due to Infection in Hydrophilic-Coated Inflatable Penile Prostheses: 11-Year Follow-up

Ege Can Serefoglu, MD,* Sree Harsha Mandava, MD,* Ahmet Gokce, MD,* Jyoti D. Chouhan, MS,† Steve K. Wilson, MD, FACS, FRCS,‡ and Wayne J.G. Hellstrom, MD, FACS*

*Department of Urology, Tulane University, New Orleans, LA, USA; †University of North Texas Health Science Center, Fort Worth, TX, USA; ‡Institute for Urologic Excellence, Indio, CA, USA

36391 IPP

Infection rate 4,6 % IPP Non Coated (7031)

vs

Infection rate 1,4 % Coated IPP (29 360)

J Sex Med 2012;9:2182–2186

Long-Term Survival of Inflatable Penile Prostheses: Single Surgical Group Experience with 2,384 First-Time Implants Spanning Two Decades

Steven K. Wilson, MD, John R. Delk, MD, Emad A. Salem, MD, and Mario A. Cleves, PhD

Department of Urology, University of Arkansas for Medical Sciences, Little Rock, AR, USA

Prosthesis	Mechanical %survival (95% CI)
All*	
1 year	97.6 (96.8, 98.1)
5 years	88.9 (87.4, 90.3)
10 years	79.4 (77.0, 81.5)
15 years	71.2 (65.4, 76.3)

J Sex Med 2007;4:1074–1079

Wich type of mechanical problem ?

Risk of Infection With an Antibiotic Coated Penile Prosthesis at Device Replacement for Mechanical Failure

Robert Abouassaly,* Kenneth W. Angermeier† and D. K. Montague‡,§

From the Section of Prosthetic Surgery and Genitourethral Reconstruction (KWA, DKM), Glickman Urological Institute (RA), Cleveland Clinic Foundation, Cleveland, Ohio

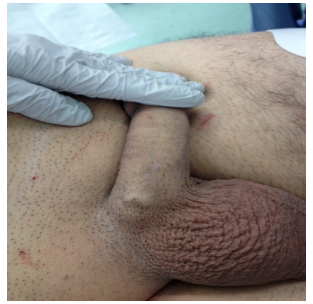


TABLE 3. *Intraoperative findings given as the cause of mechanical failure*

	No. Pts (%)
Cylinder leak	25 (45)
Tubing leak/break	7 (13)
Cylinder crossover	3 (5.5)
Connector leak	2 (3.5)
Reservoir leak	2 (3.5)
Poor glans support (supersonic transporter deformity)	2 (3.5)
Pump malfunction	2 (3.5)
Dissatisfaction	1 (1.8)
Fluid loss not otherwise specified	11 (20)

Abouassaly J Urol 2006 Vol 176 2471-2473

Penile Implant Satisfaction Data: 85 to 97 %

Hellstrom WJG J Sex Med 2010;7:501–523

Table 5 Recent publications of IPP satisfaction data

Author	Year	Satisfaction	Comment
Natali et al. [48]	2008	97%/81%/75%	AMS 700CX/Ambicor/600-650
Xuan et al. [49]	2007	97.6%	Percent achieving coitus
Lux et al. [41]	2007	85%	Ambicor modified two-piece
Kava et al. [54]	2007	77%	Only post-revision patients evaluated
Akin-Olugbade et al. [50]	2006	60–86% (15 out of 20)	RP, obesity, and PD were negative predictors of satisfaction
Mulhall et al. [51]	2003	IIEF 15 at one year (baseline 7 out of 20)	IIEF satisfaction domain at 1 year doubled from baseline

Patient and Partner Satisfaction after AMS Inflatable Penile Prosthesis Implant

Carlo Bettocchi, MD, Fabrizio Palumbo, MD, Marco Spilotros, MD, Giuseppe Lucarelli, MD, Silvano Palazzo, MD, Michele Battaglia, PhD, Francesco Paolo Selvaggi, PhD, and Pasquale Ditonno, PhD

University of Bari—Department of Emergency and Organ Transplantation Urology, Andrology and Kidney Transplantation Unit, Bari, Italy

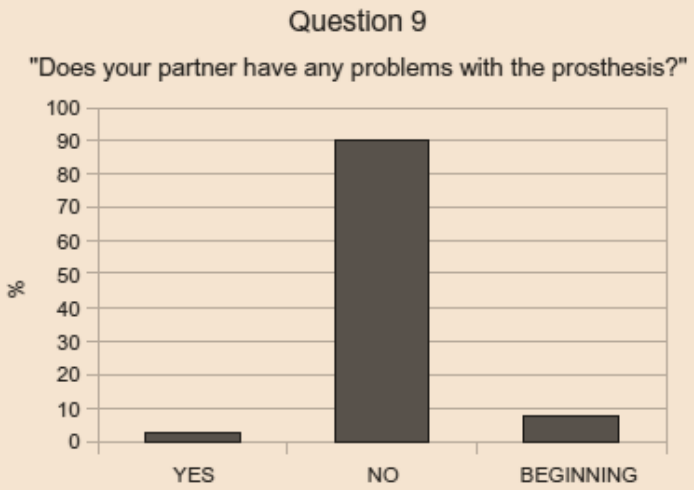
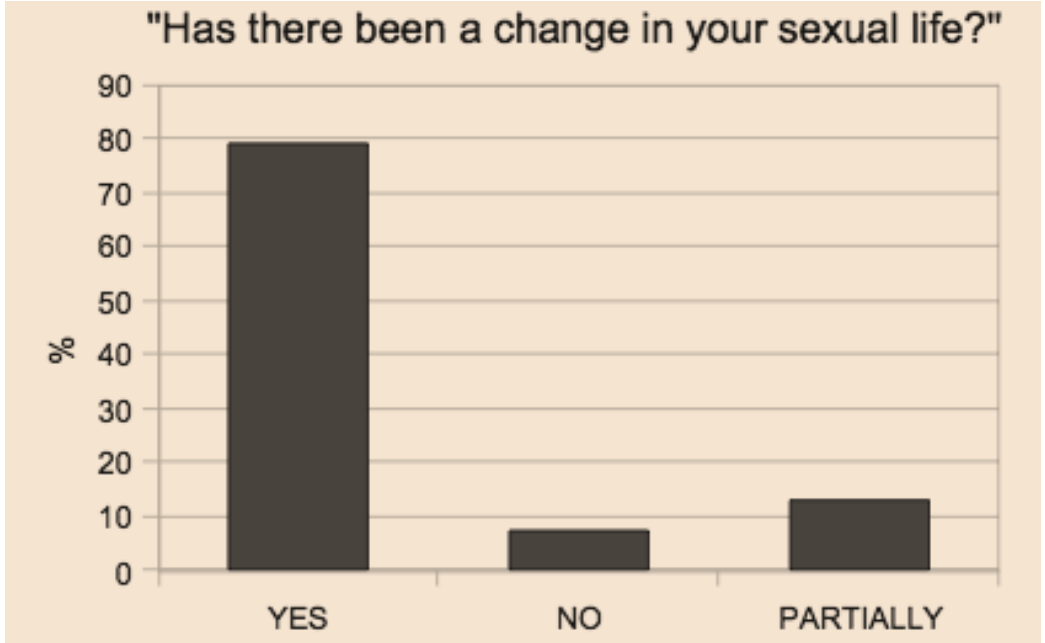


Figure 3 The 90% of the partners answered they had no problems with the use of the prosthesis and they considered themselves satisfied.



J Sex Med 2010;7:304–309

ERECTILE DYSFONCTION and PENILE IMPLANT
« The Best Solution for the Worst Situation » ?

YES

IPP placement is a safe procedure

Need of Experienced Implants Surgeons and Center of Excellence

A sepsis « challenging procedure » but a low rate of infection

A High rate of satisfaction and duration

Thank you for your attention

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