

CENTER FOR RECONSTRUCTIVE URETHRAL SURGERY



GUIDO BARBAGLI, M.D.
Arezzo - Italy

e-mail: info@urethralcenter.it

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Center for Reconstructive Urethral
Surgery - Arezzo - Italy

SAVA PEROVIC FOUNDATION

CENTER FOR GENITO-URETHRAL
RECONSTRUCTIVE SURGERY

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HANDS ON TRAINING

ALL PARTICIPANTS WILL BE INCLUDED
AS MEMBER OF THE SURGERY TEAM

BELGRADE, FEBRUARY 23-26, 2015

1ST INTERNATIONAL COURSE ON URO-GENITAL RECONSTRUCTIVE SURGERY

— LIVE SURGERY AND LECTURES —

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Anatomy of male urethra and surgical approaches: concepts and concerns



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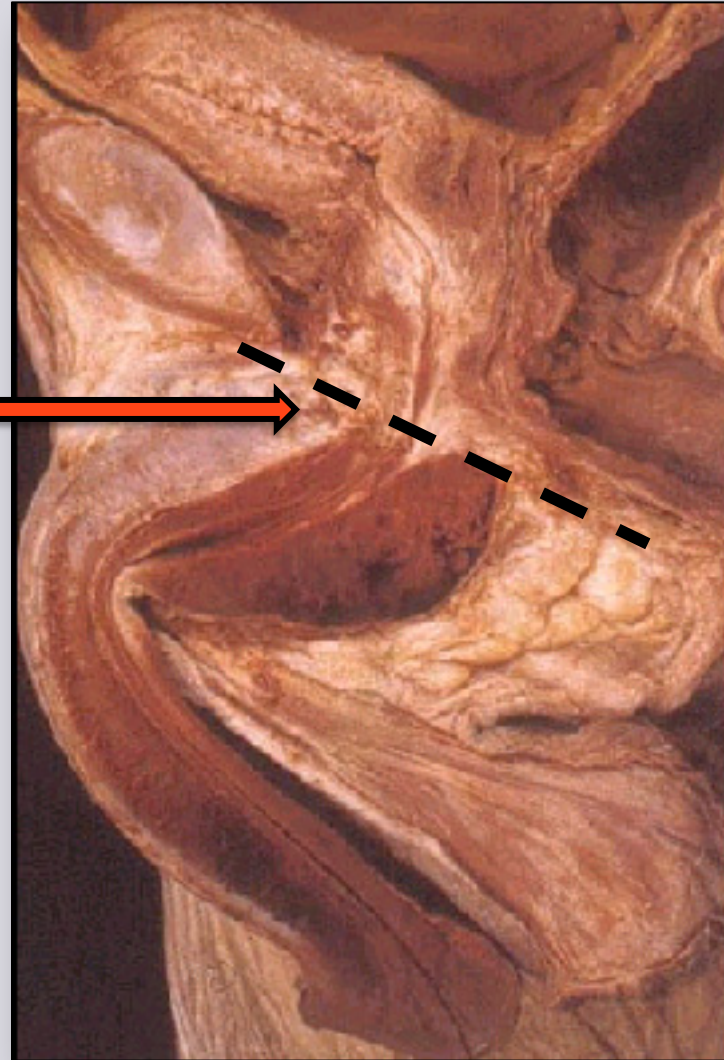
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Male urethra

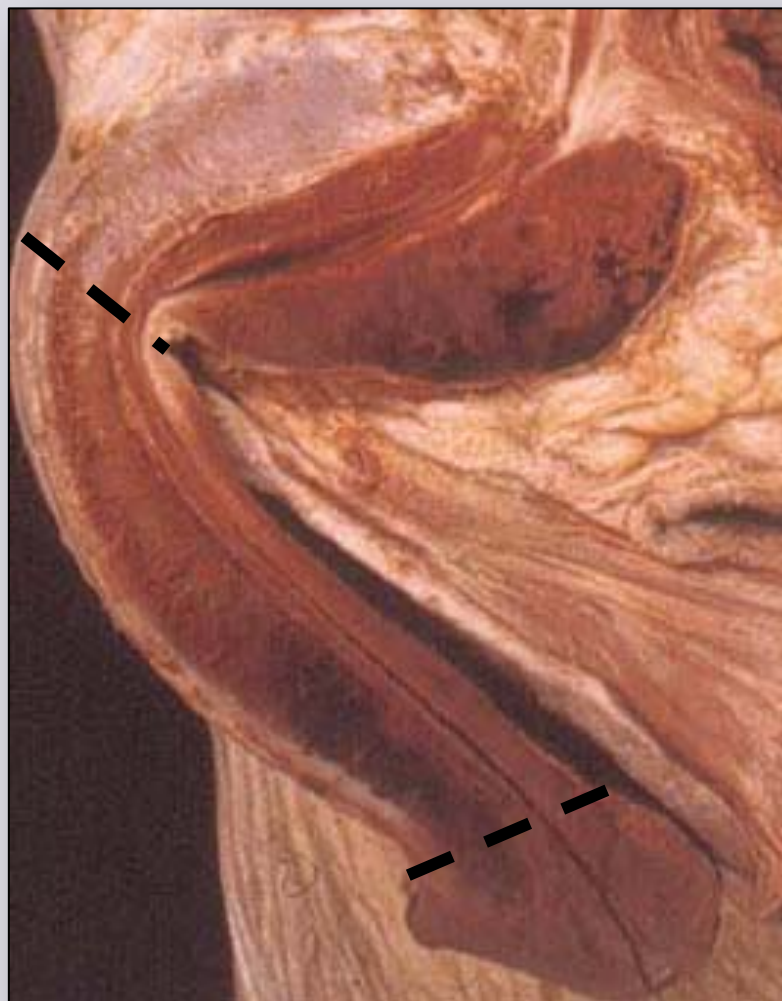
Posterior urethra



Anterior urethra



Anterior urethra



**Penile
urethra**

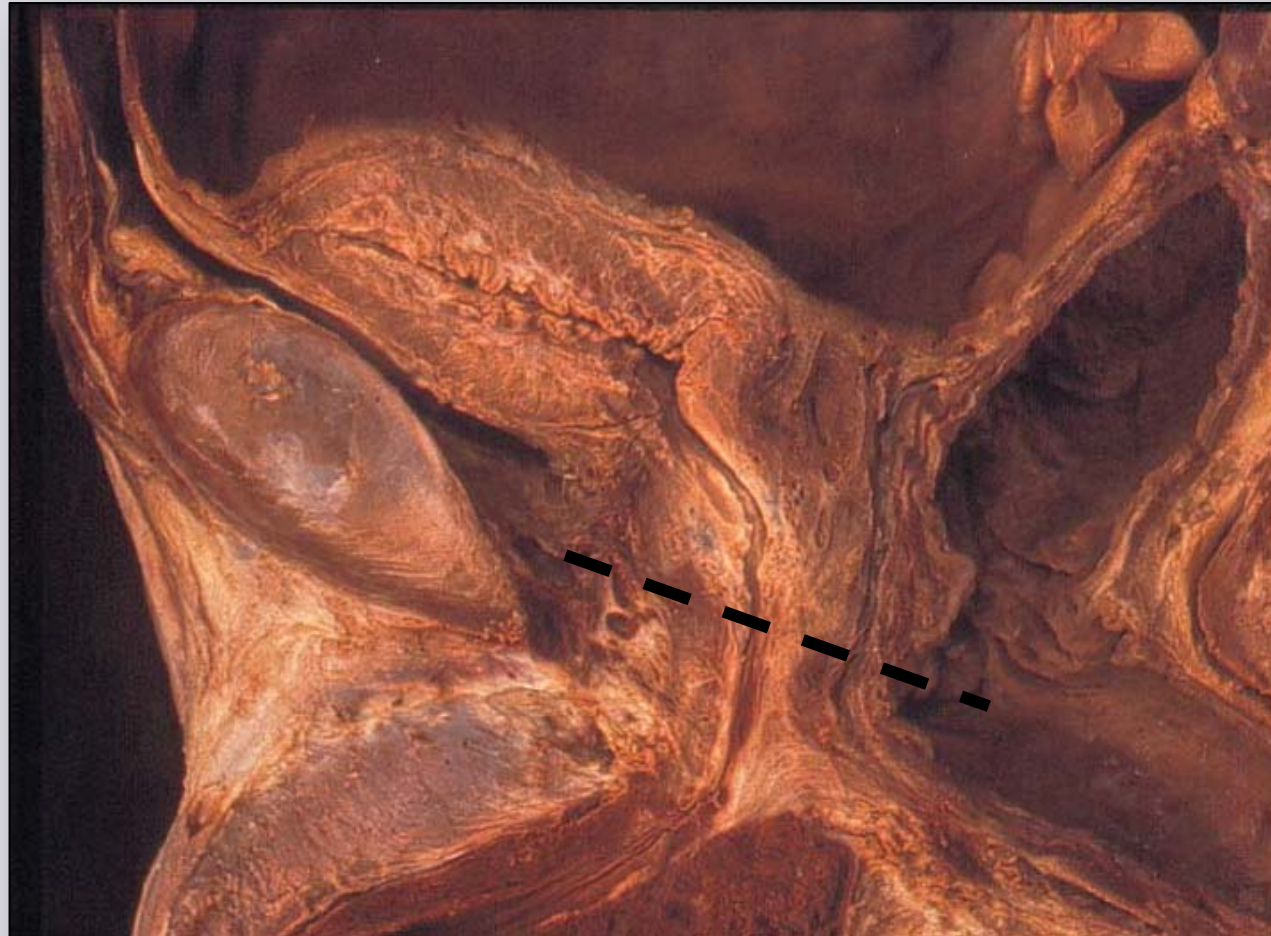
Bulbar urethra

**Navicularis
urethra**

Posterior urethra

**Prostatic
urethra**

**Membranous
urethra**

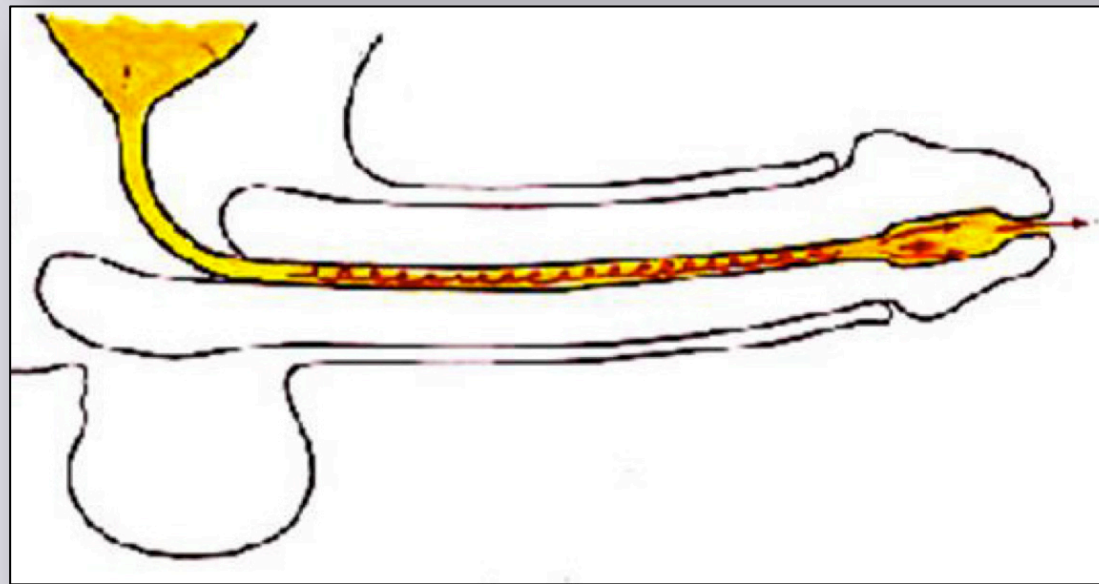
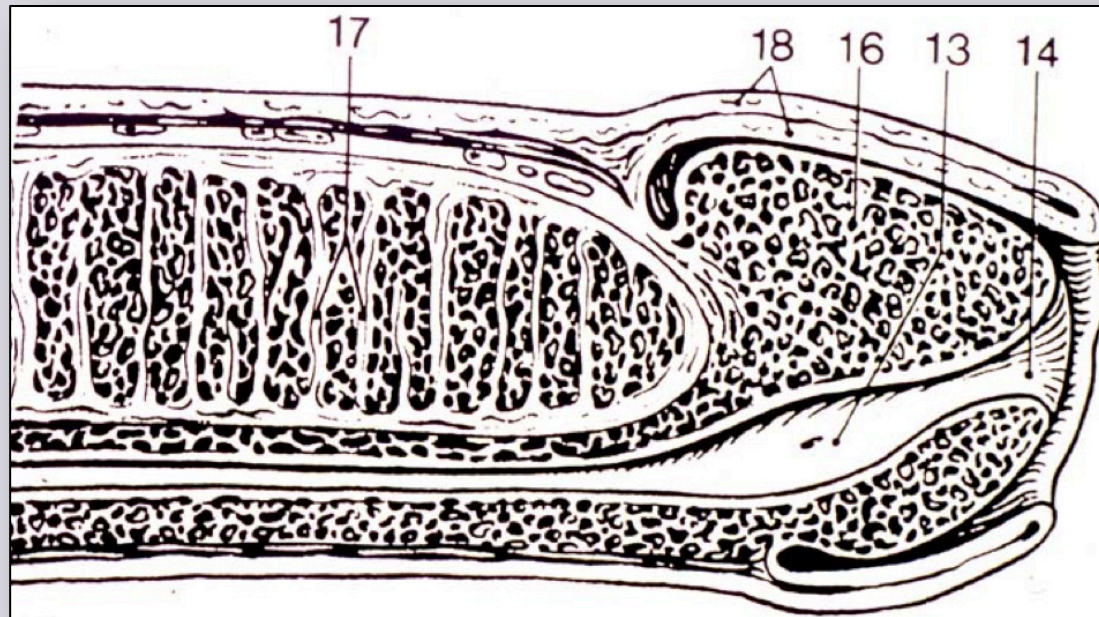


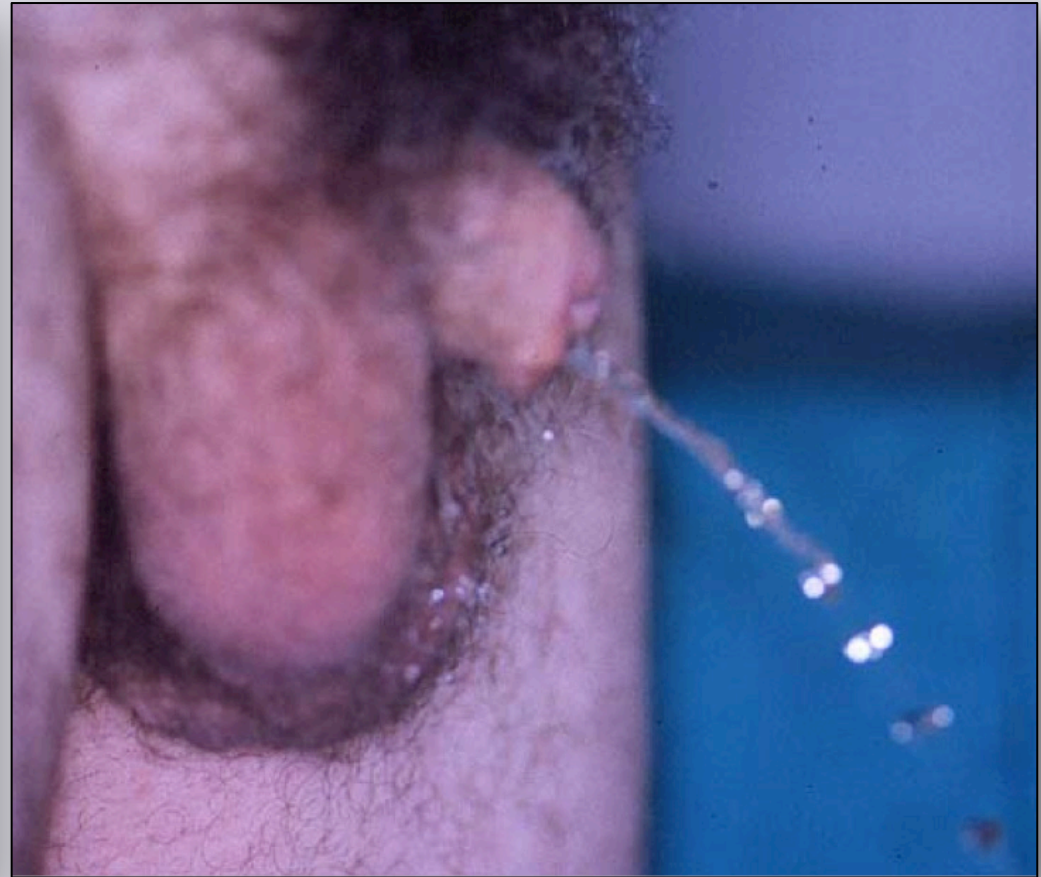
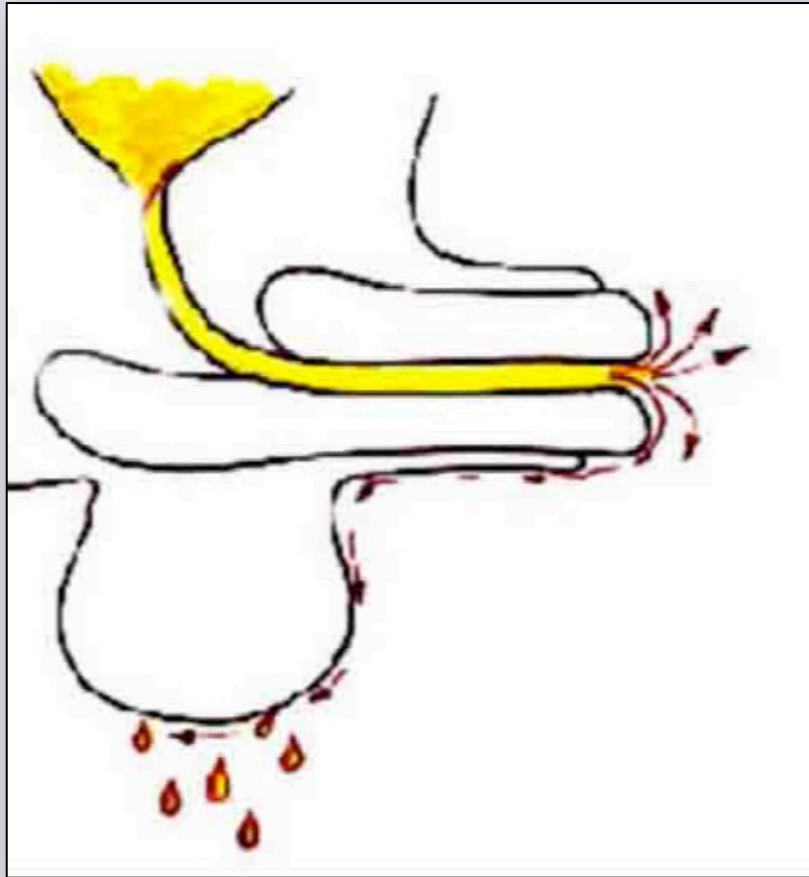
Navicularis urethra



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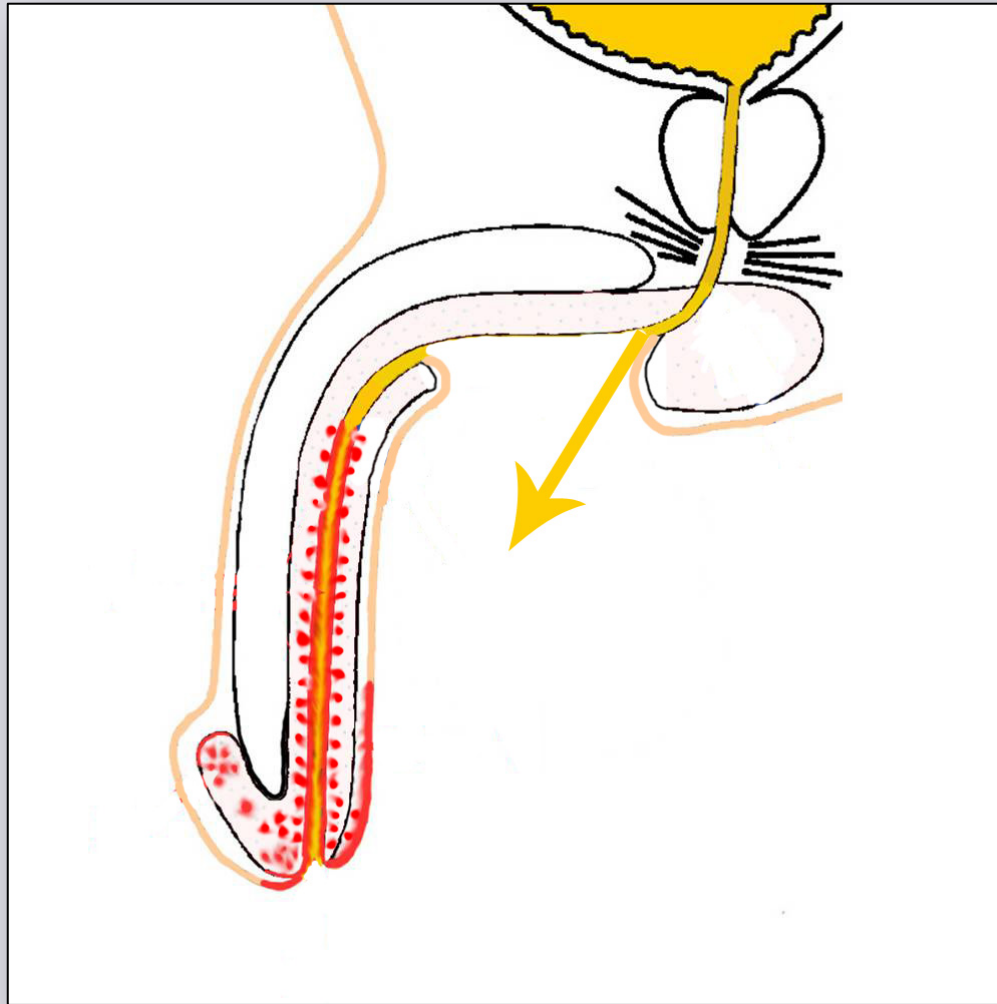
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Perineal urethrostomy diverts urine from diseased tissues





**HEROIC MEASURES MAY NOT ALWAYS BE JUSTIFIED IN
EXTENSIVE URETHRAL STRICTURE DUE TO LICHEN
SCLEROSUS (BALANITIS XEROTICA OBLITERANS)**

ANDREW C. PETERSON, ENZO PALMINTERI, MASSIMO LAZZERI, GIORGIO GUANZONI,
GUIDO BARBAGLI, AND GEORGE D. WEBSTER

Urology 2004; 64: 565-586

**Clinical Outcome and Quality of Life Assessment in Patients
Treated With Perineal Urethroscopy for Anterior Urethral
Stricture Disease**

Guido Barbagli, Michele De Angelis, Giuseppe Romano and Massimo Lazzeri*

*From the Center for Reconstructive Urethral Surgery (GB) and Unità Operativa Urologia, Ospedale San Donato (MDA, GR), Arezzo,
and Department of Urology, Santa Chiara-Firenze, Florence (ML), Italy*

J Urol 2009; 182: 548-557

What's new in urethroplasty

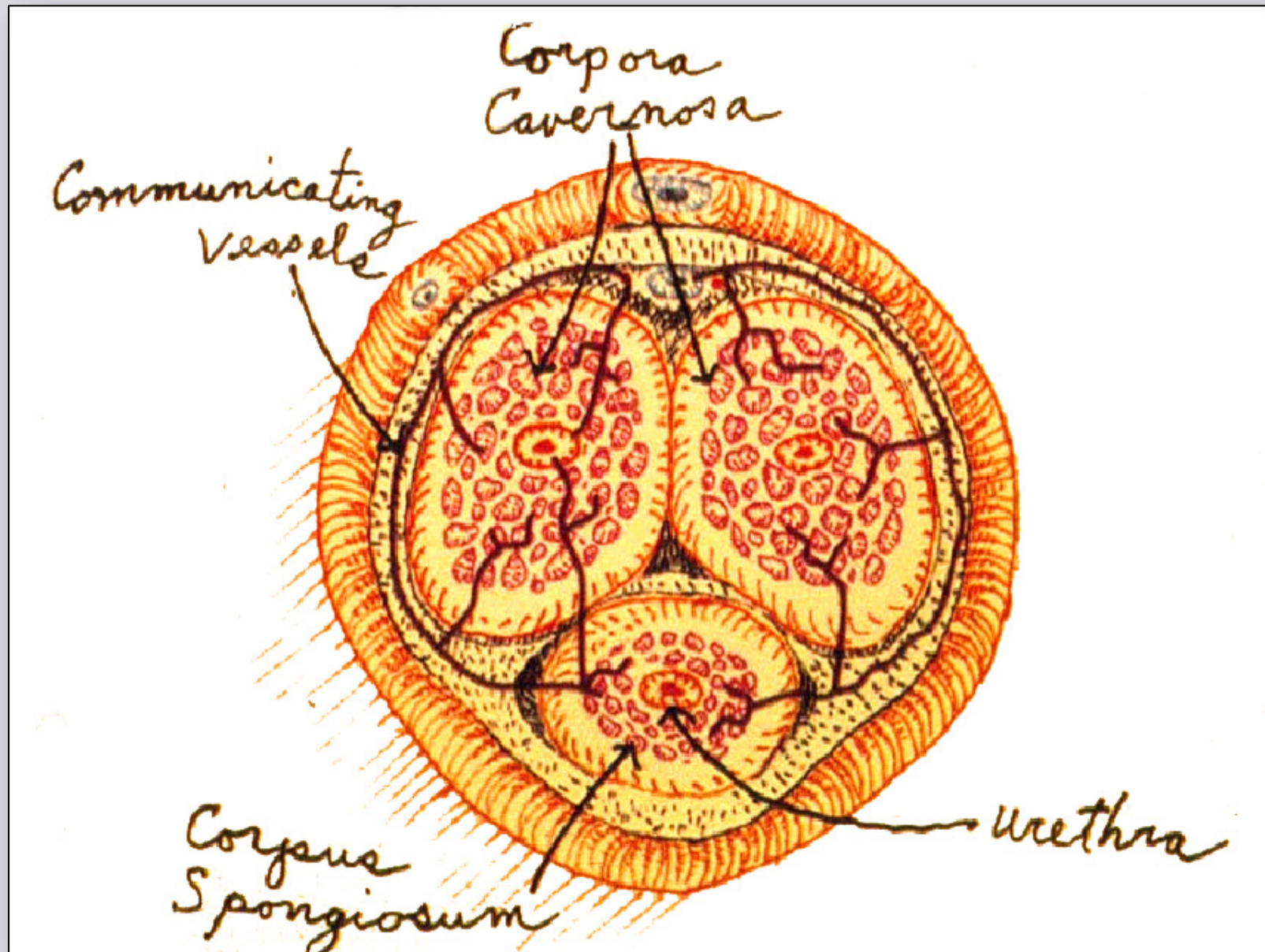
- 1. Re-evaluation of simple definitive perineal urethrostomy vs complex one-stage reconstruction in complex anterior stricture disease**

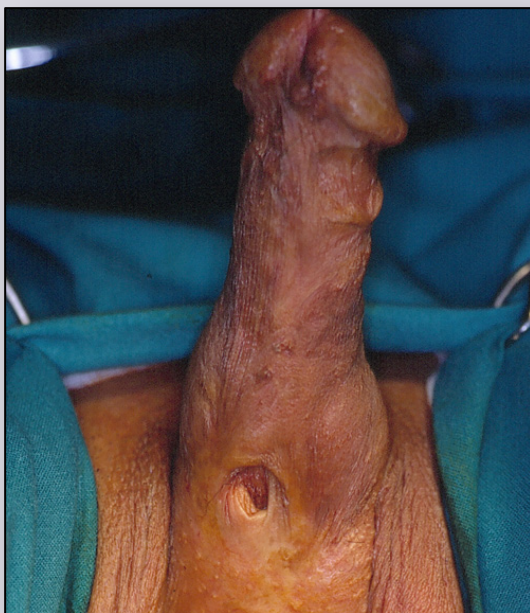
Penile urethra



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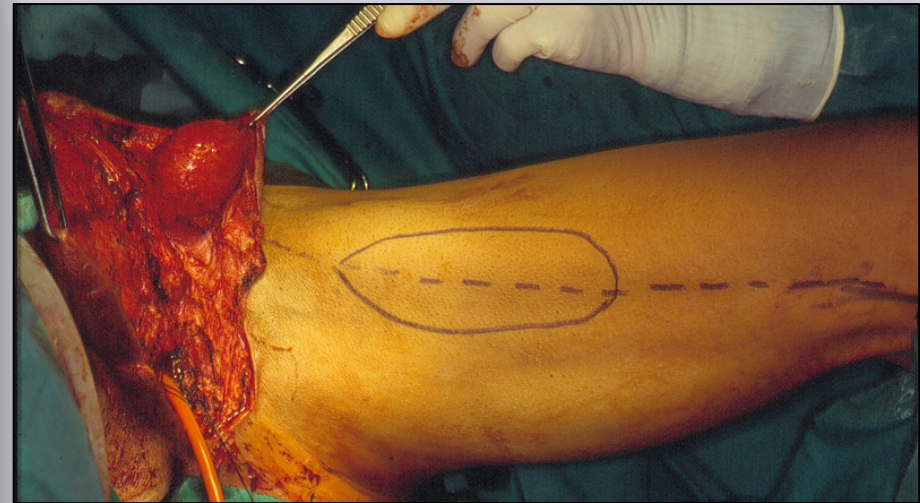
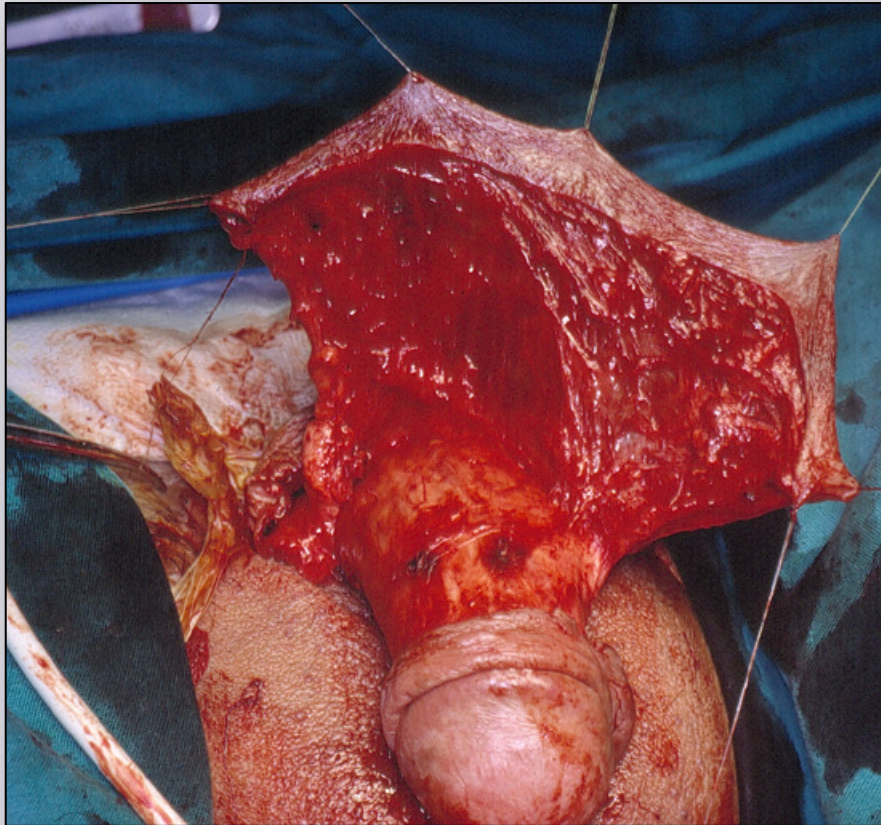
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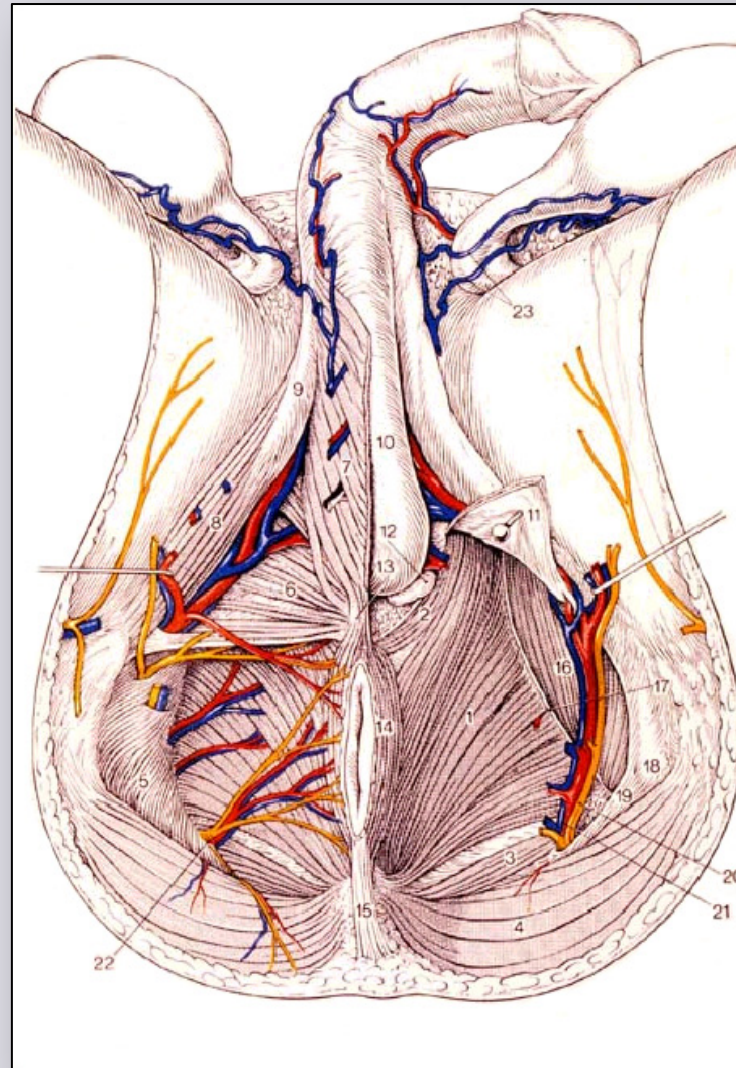
What's new in urethroplasty

2. Re-evaluation of one-stage reconstruction using oral graft vs skin flap

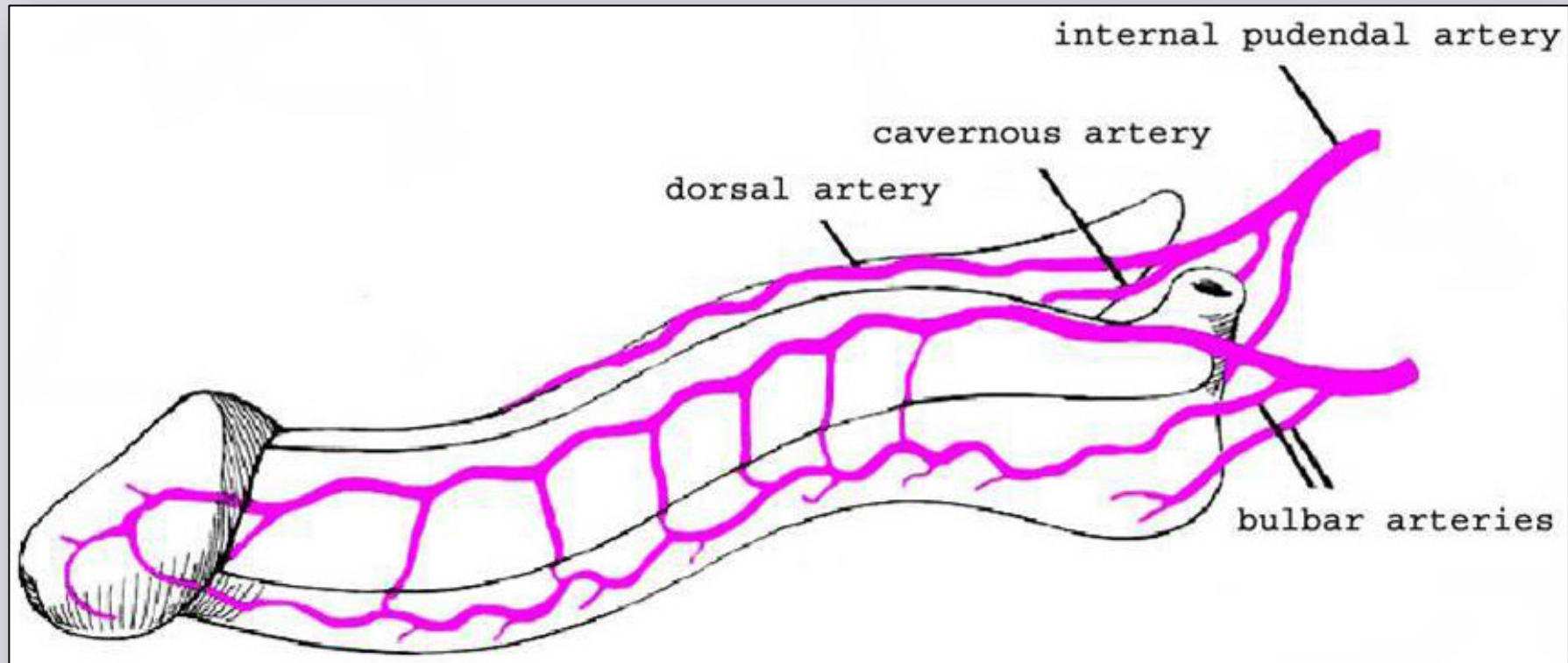
Bulbar urethra

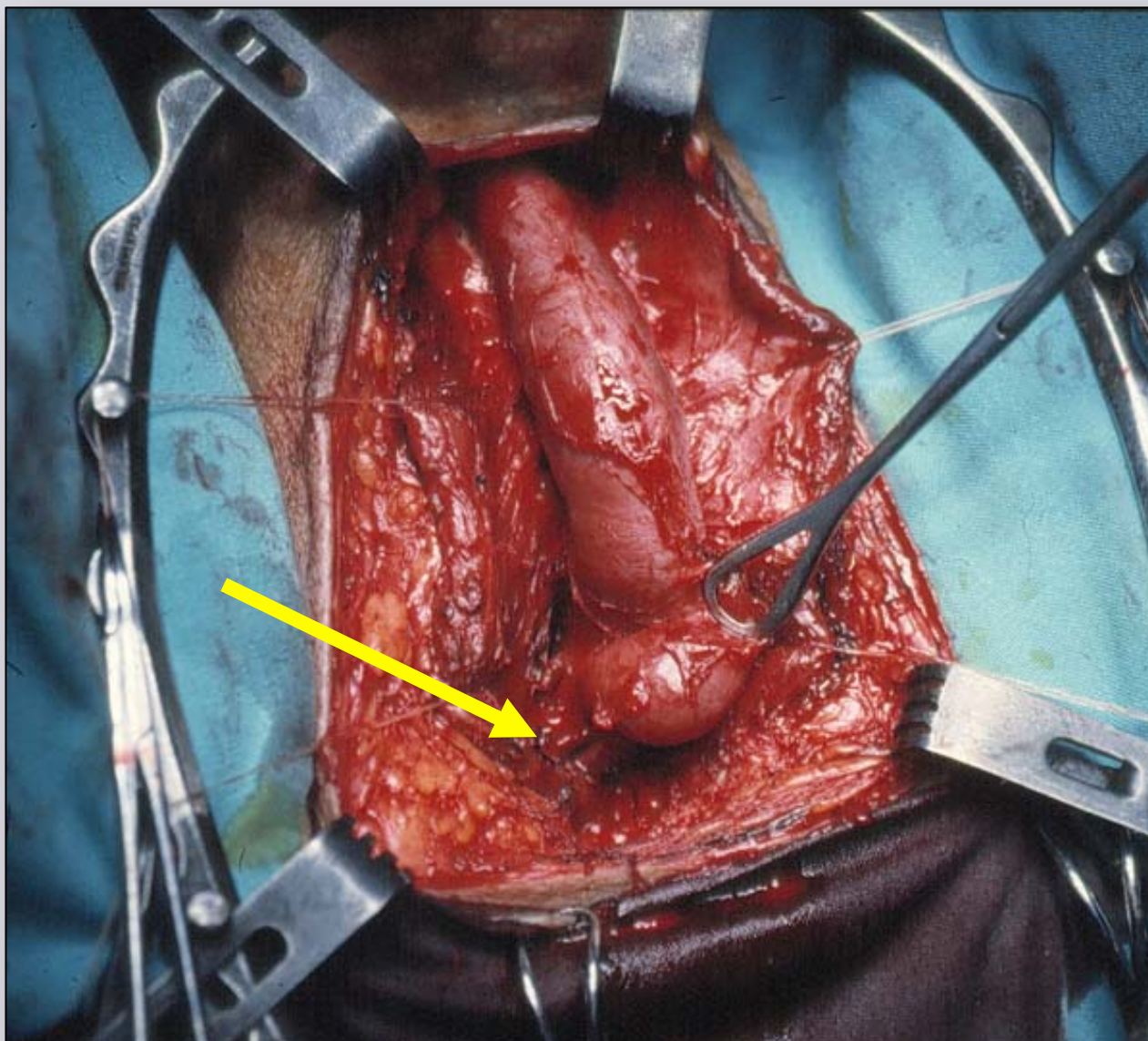


Arterial supply



Arterial supply

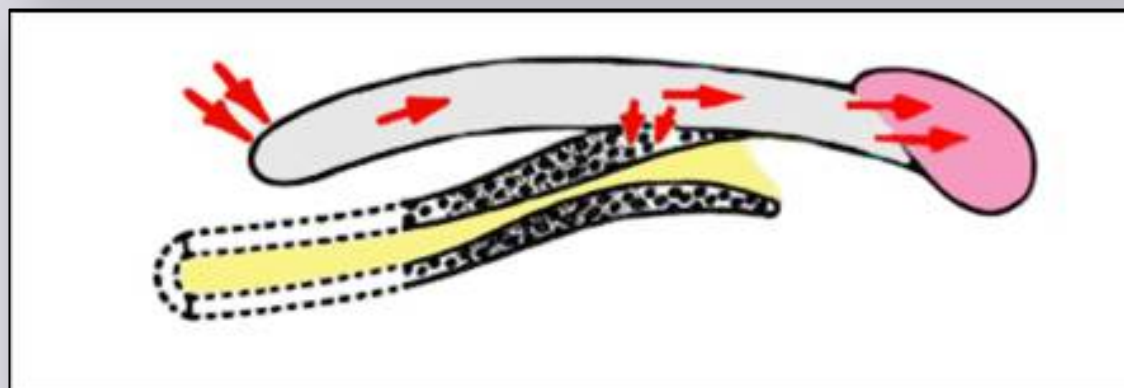
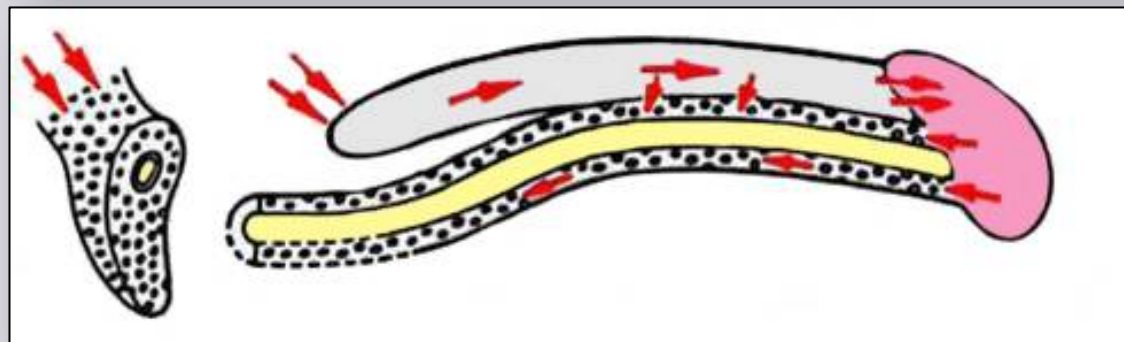
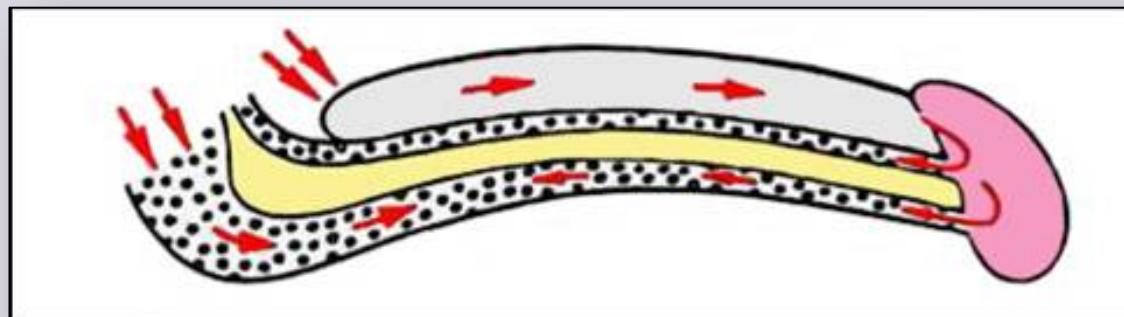




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Arterial supply



Arterial supply



Vascular necrosis of the bulbar urethra



Non-transecting anastomotic bulbar urethroplasty: a preliminary report

Daniela E. Andrich and Anthony R. Mundy

Institute of Urology, London, UK

Accepted for publication 21 April 2011

Br J Urol Int 2011; 109:1090-1094

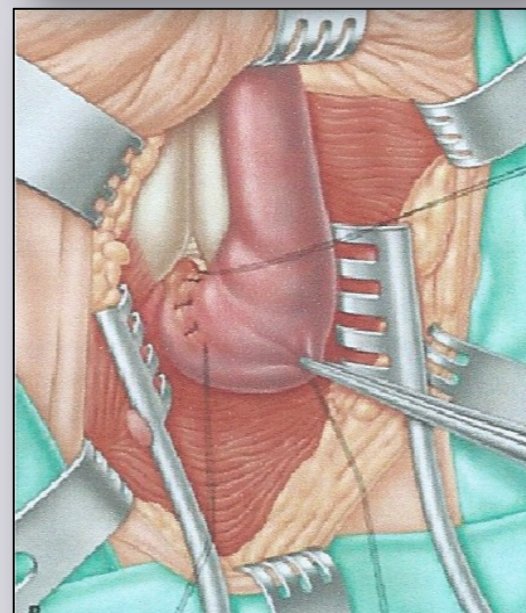
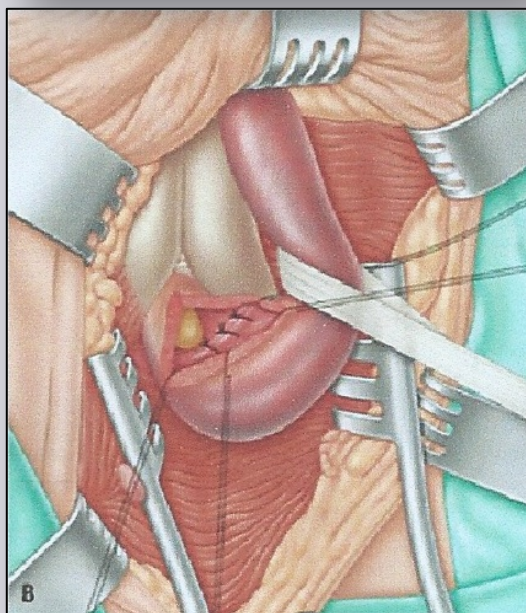
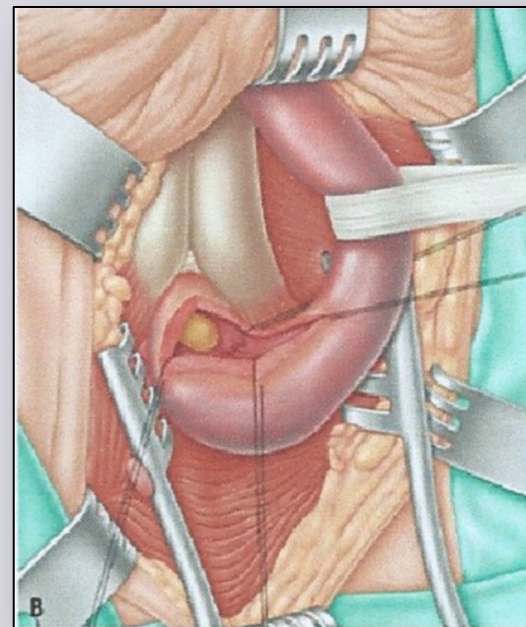
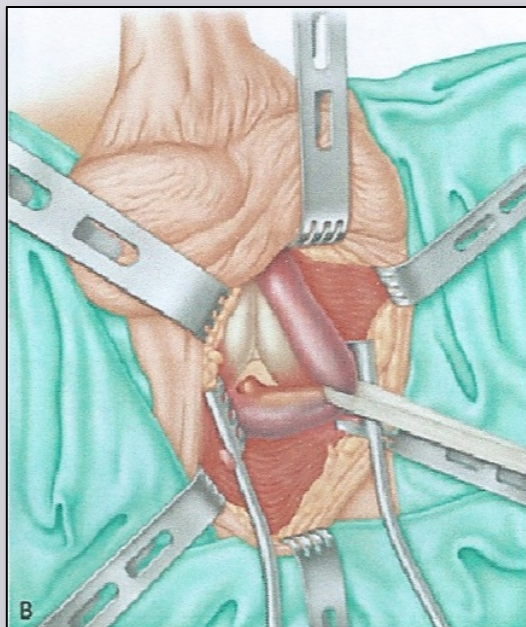
REVIEW



Bulbar urethroplasty: transecting vs. nontransecting techniques

Guido Barbagli^a, Salvatore Sansalone^b, Giuseppe Romano^a, and Massimo Lazzeri^c

Curr Opin Urol Int 2012; 22:474-477

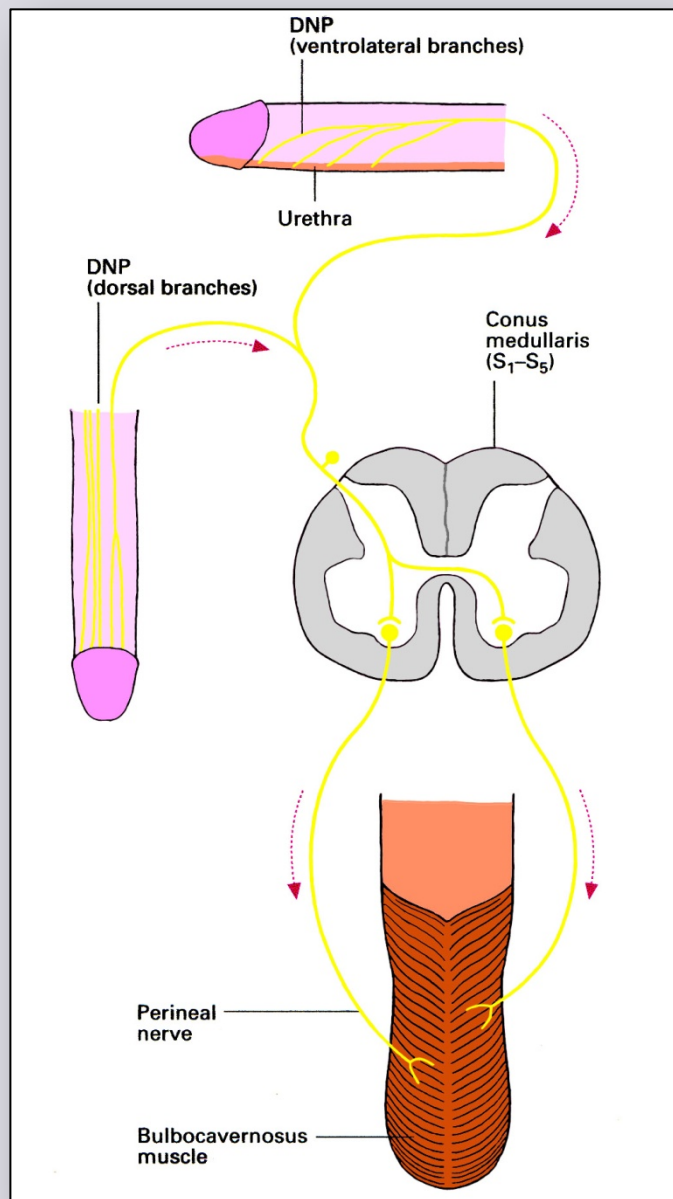


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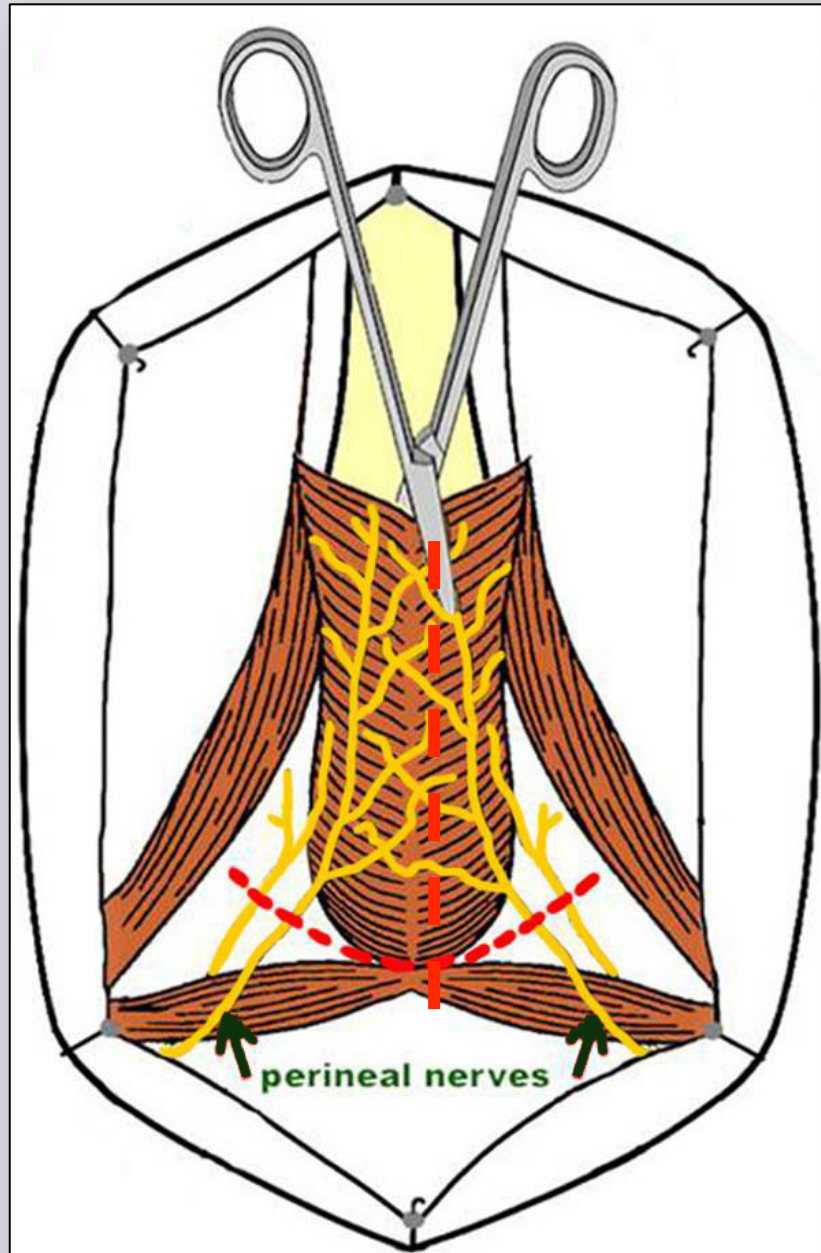
What's new in urethroplasty

3. Re-evaluation of non-transecting techniques vs anastomotic repair



Rhythmic contractions of the bulbo-spongiosum muscles and other perineal muscles expel semen from the urethra and have an important role in expelling urine, avoiding urine sequestration in the large urethral bulb.

Yang and Bradley, BJU International 2000; 85:857-863



During bulbar urethroplasty, damage to the bulbospongiosum muscle and to the perineal nerves may play a role in determining loss of efficient urethral contraction, causing difficulties in expelling semen and urine, and temporary or permanent sexual dysfunction.

Loss of efficient contraction of the bulbo-spongiosum muscles and corpus spongiosum

- ✓ **decreased force of the ejaculation jet**
 - ✓ **loss of the ejaculation jet**
 - ✓ **semen sequestration**
 - ✓ **infertility**
-
- ✓ **urine sequestration in the urethral bulb**
 - ✓ **post-voiding dribbling**

Surgery in Motion

Muscle- and Nerve-sparing Bulbar Urethroplasty: A New Technique

**Guido Barbagli^a, Stefano De Stefani^b, Filippo Annino^{b,*}, Cosimo De Carne^b,
Giampaolo Bianchi^b**

^aCenter for Reconstructive Urethral Surgery, Arezzo, Italy

^bDepartment of Urology, University of Modena-Reggio Emilia, Modena, Italy

Eur Urol 2008; 54:335-345

BJUI
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One-sided anterior urethroplasty: a new dorsal onlay graft technique

Sanjay Kulkarni, Guido Barbagli*, Salvatore Sansalone[†] and Massimo Lazzeri[‡]

*Centre for Reconstructive Urethral Surgery, Pune, India; *Centre for Reconstructive Urethral Surgery, Arezzo,*

*[†]Department of Urology, University Tor Vergata, Rome, and [‡]Department of Urology, Santa Chiara-Firenze, GIOMI
Group, Florence, Italy*

Accepted for publication 5 December 2008

Br J Urol Int 2009; 104:1150-1155

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What's new in urethroplasty

4. Re-evaluation of muscle and nerve sparing approaches to the bulbar urethra



AVOIDING ERECTILE DYSFUNCTION IN URETHRAL SURGERY

Guido Barbagli and Massimo Lazzeri

**Is erectile dysfunction a real issue
after open urethroplasty?**



How can you avoid it?

Is erectile dysfunction a real issue after open urethroplasty?

Epidemiology

- The difficulty of accurately defining erectile dysfunction before and after open reconstructive surgery led to lack of information about epidemiology.

Epidemiology

The Effect of Bulbar Urethroplasty on Erectile Function

Jennifer T. Anger,* Neil D. Sherman and George D. Webster

From the Department of Urology, University of California-Los Angeles (JTA), Los Angeles, California, Division of Urology, University of Medicine and Dentistry of New Jersey (NDS), New Brunswick, New Jersey, and Division of Urology, Duke University Medical Center (GDW), Durham, North Carolina

CONCLUSIONS

We report on men undergoing 4 variations of bulbar urethroplasty and we found that such surgery had an insignificant effect on EF. Surgical complexity with long stricture excision and the use of a buccal graft did not influence outcome. Our data suggest that increasing age and preoperative erectile dysfunction may adversely affect postoperative outcome.

J Urol 2007; 178: 10090

Epidemiology

Long-Term Followup of Bulbar End-to-End Anastomosis: A Retrospective Analysis of 153 Patients in a Single Center Experience

Guido Barbagli, Michele De Angelis, Giuseppe Romano and Massimo Lazzeri*

From the Center for Urethral Reconstructive Surgery (GB), Unità Operativa Urologia, Ospedale San Donato (MDA, GR), Arezzo, and Department of Urology, Santa Chiara-Firenze, Florence (ML), Italy

With regard to the prevalence of postoperative sexual function disorders, 12 patients (20%) experienced decreased ejaculation force and in 2 patients (3.3%) ejaculation was possible only by manually compressing the perineum at the level of the urethral bulb. One patient (1.6%) had a cold glans during erection, 7 (11.6%) had a glans that was neither full nor swollen during erection and 11 (18.3%) had decreased sensitivity of the glans or distal penile shaft. No

J Urol 2007; 178: 2470

2060

The Relationship Between Erectile Dysfunction and Open Urethroplasty: A Systematic Review and Meta-Analysis

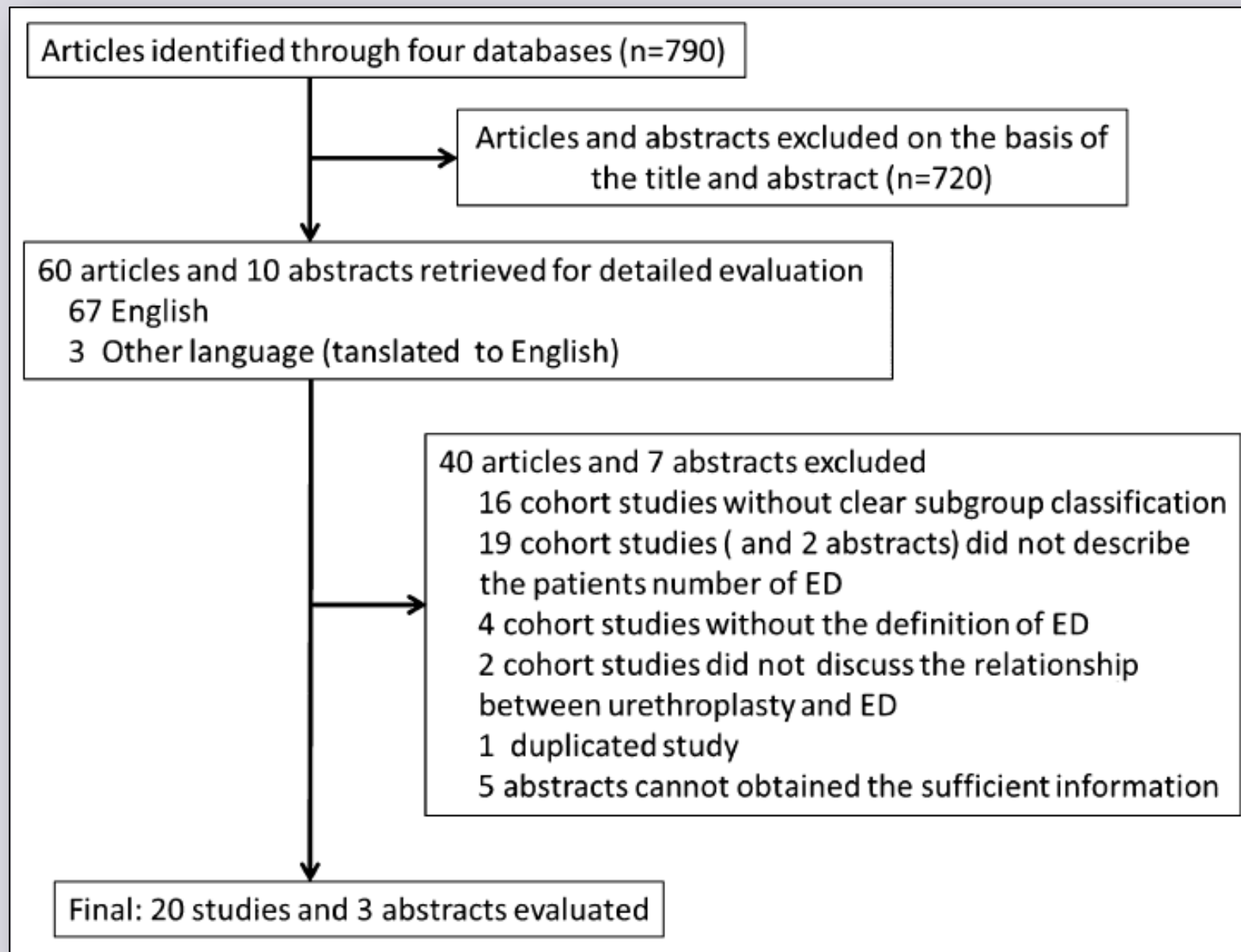
Chao Feng, MD, PhD,* Yue-Min Xu, MD, PhD,* Guido Barbagli, MD, PhD,[†]
Massimo Lazzeri, MD, PhD,[†] Chen-ye Tang, MD,* Qiang Fu, MD, PhD,* and Ying-Long Sa, MD*

*The Department of Urology, Affiliated Sixth People's Hospital, Shanghai Jiaotong University, Shanghai, China;

[†]The Center for Reconstructive Urethral Surgery, Arezzo, Italy

DOI: 10.1111/jsm.12181

J Sex Med 2013; 10: 2060



Conclusions

**Comparison of incidence of ED before vs. after
bulbar urethroplasty.**

**Out of 20 studies included in the analysis only 5 studies,
eligible for metanalysis, reported data on erectile function
before and after open urethroplasty.**

**No statistical difference was found in the incidence of ED
pre and post operation.**

J Sex Med 2013; 10: 2060

Conclusions

Comparison of different type of bulbar urethroplasty.

Patients who underwent bulbar graft urethroplasty showed less incidence (16.67%) of ED compared to patients who underwent anastomotic transecting urethroplasty (36.54%).

J Sex Med 2013; 10: 2060

Conclusions

**Comparison of incidence of ED before vs. after
posterior urethroplasty.**

**Out of 20 studies included in the analysis only 6 studies,
eligible for metaanalysis, reported data on erectile function
before and after open urethroplasty.**

**The incidence of ED before the operation was significantly
higher than after the operation.**

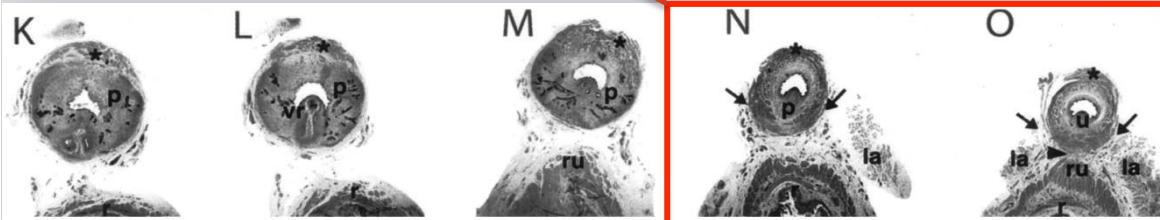
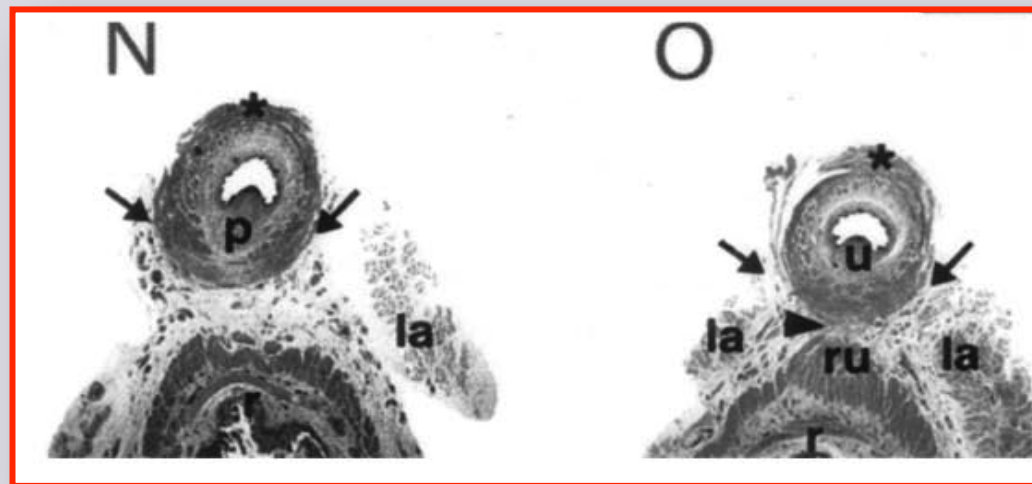
J Sex Med 2013; 10: 2060

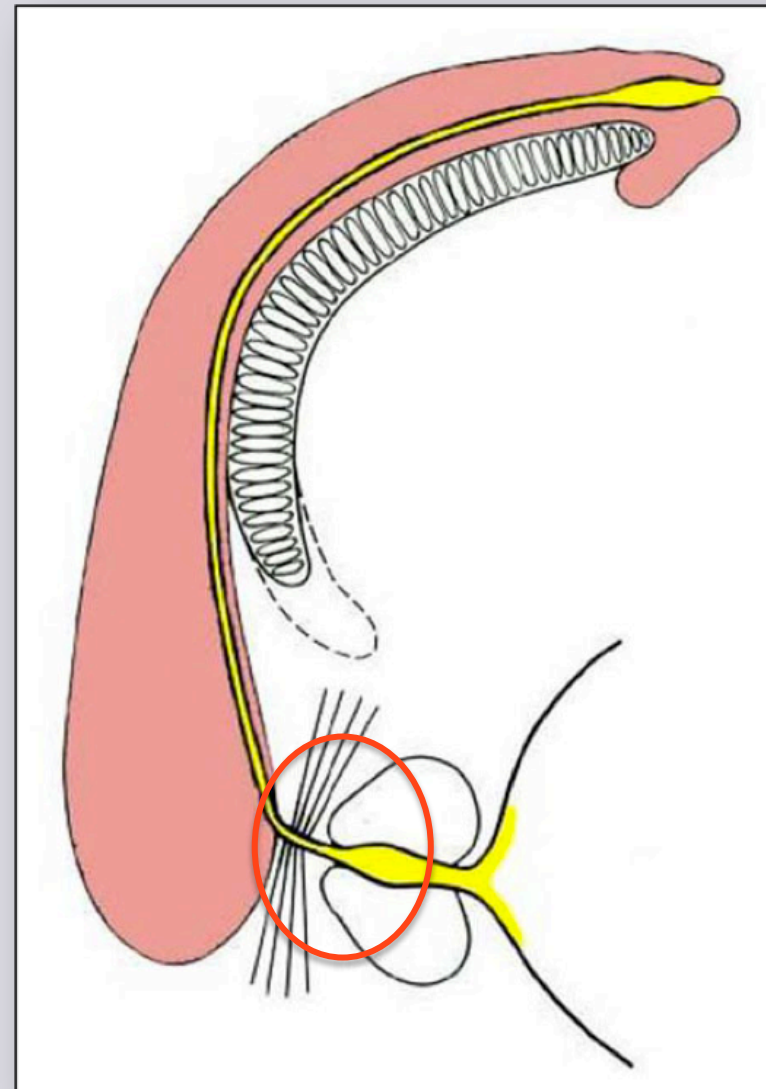
Erectile dysfunction in urethral surgery

How can you avoid it?

Anatomy

- Neurovascular bundles run along the posterior urethra

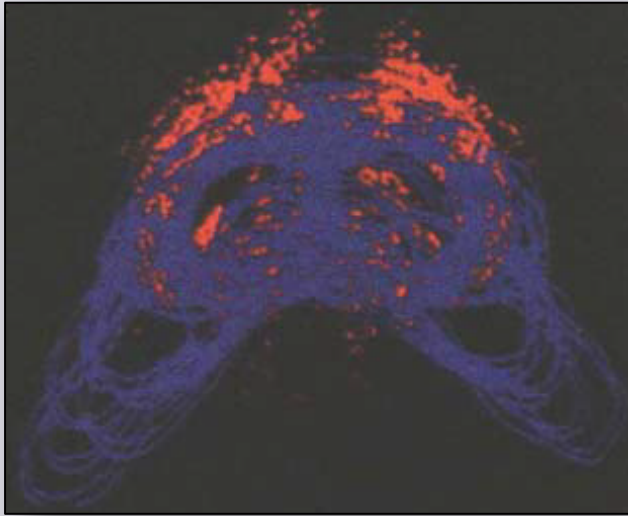




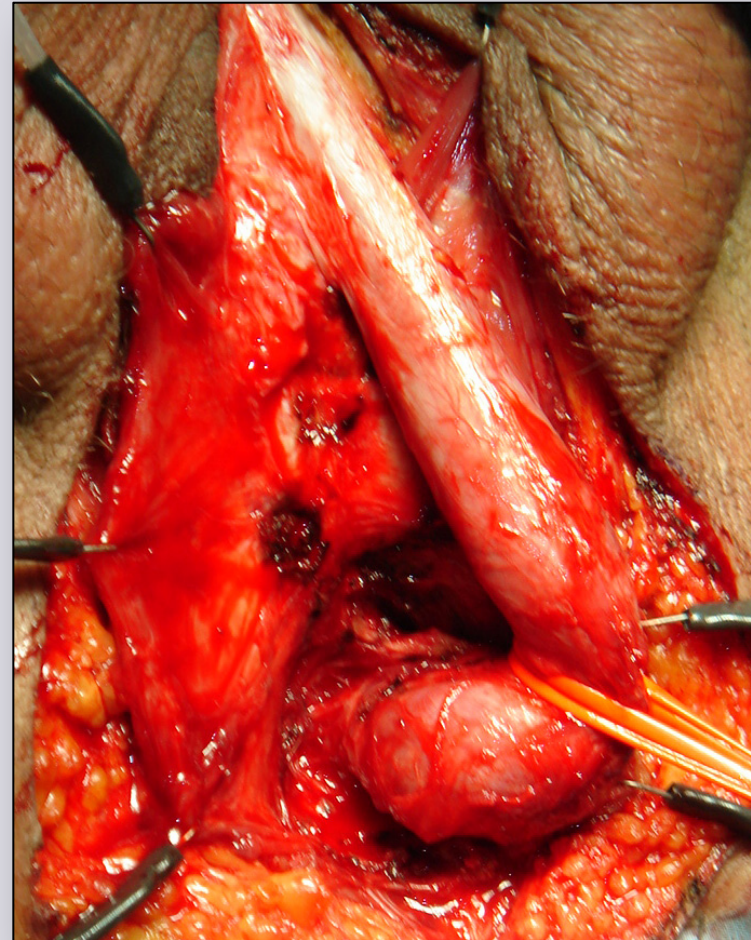
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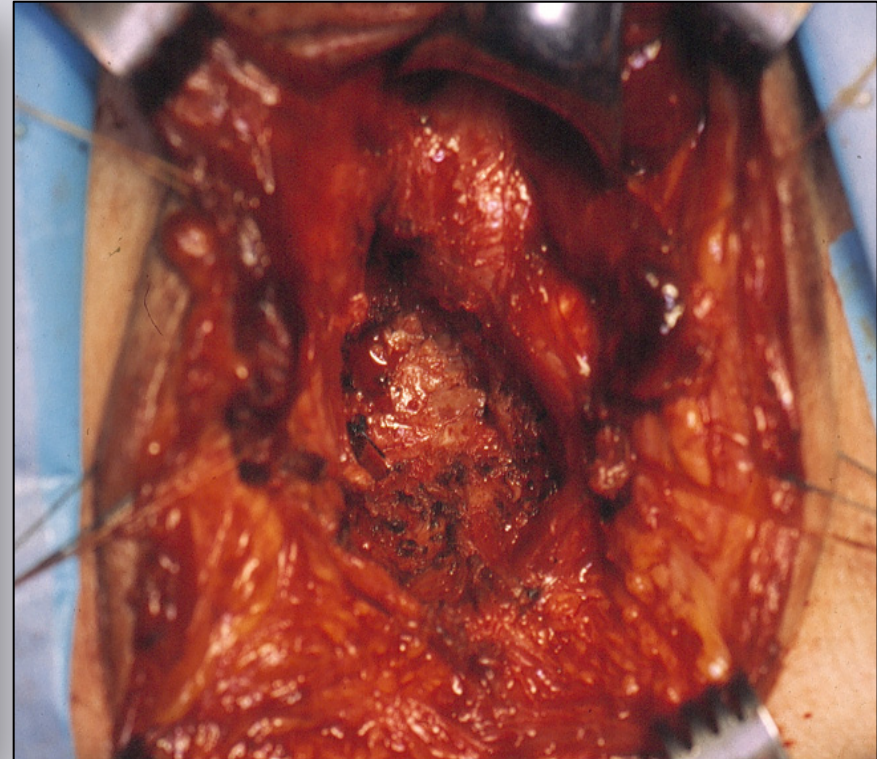
To avoid erectile dysfunction



Avoid the use of cautery



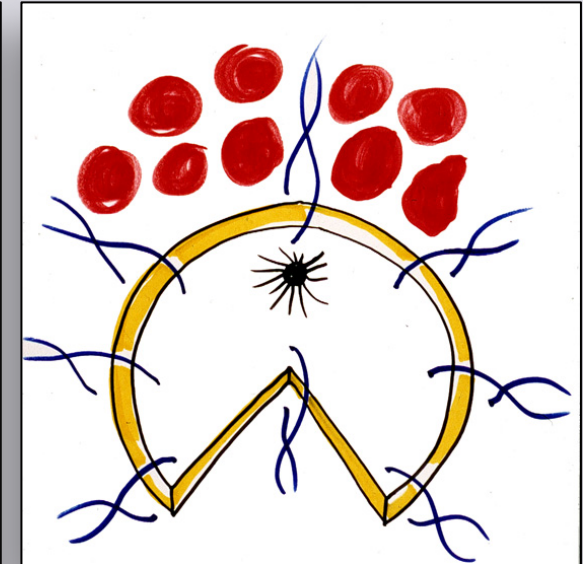
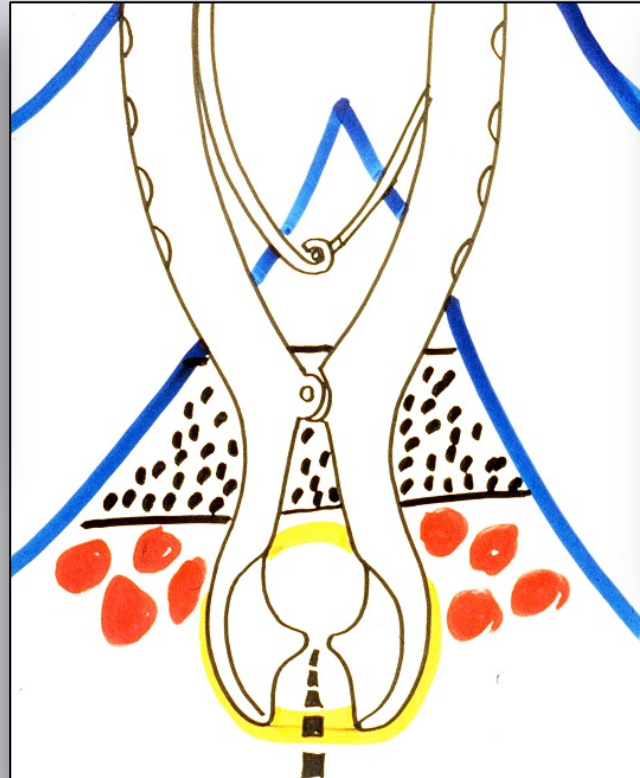
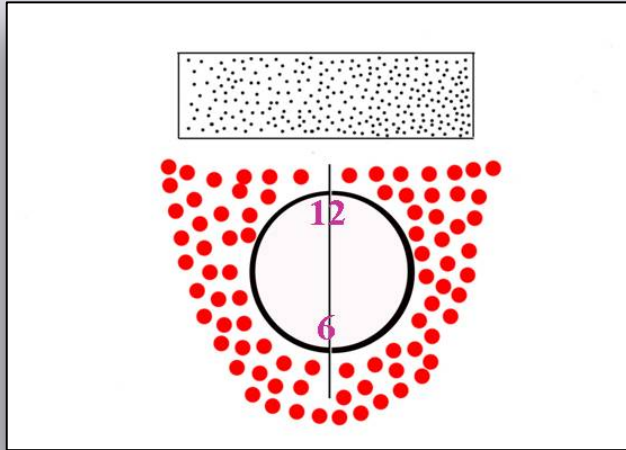
Posterior urethroplasty



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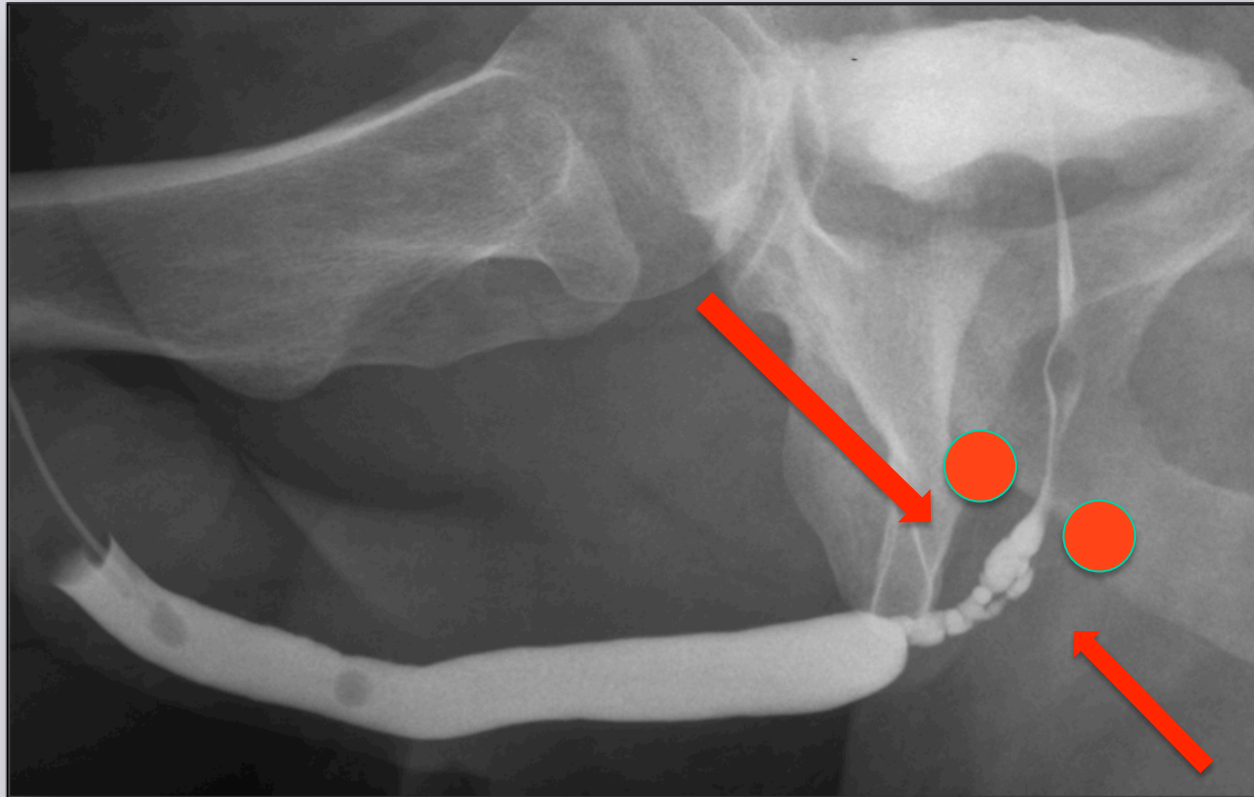
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To avoid erectile dysfunction



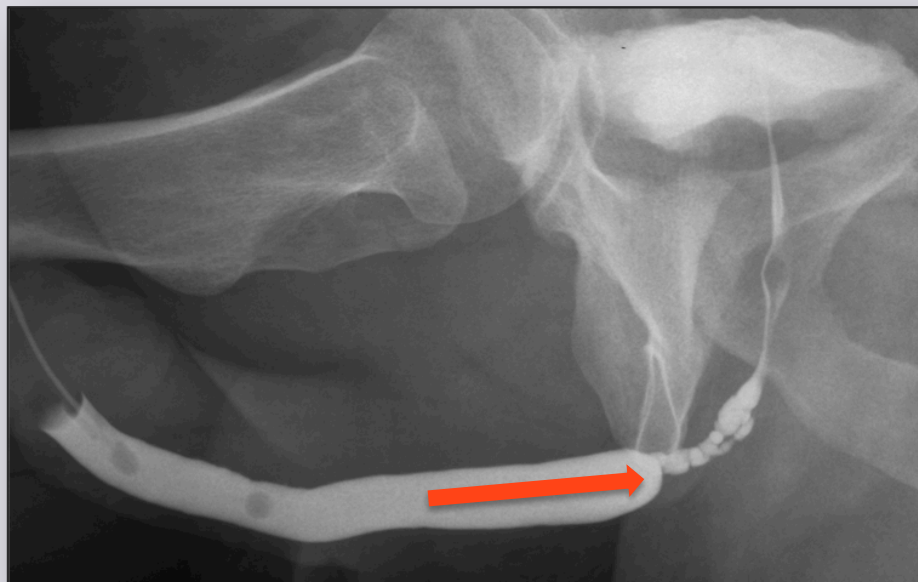
Avoid aggressive dissection: work between 12 – 6 o'clock

Bulbar urethroplasty

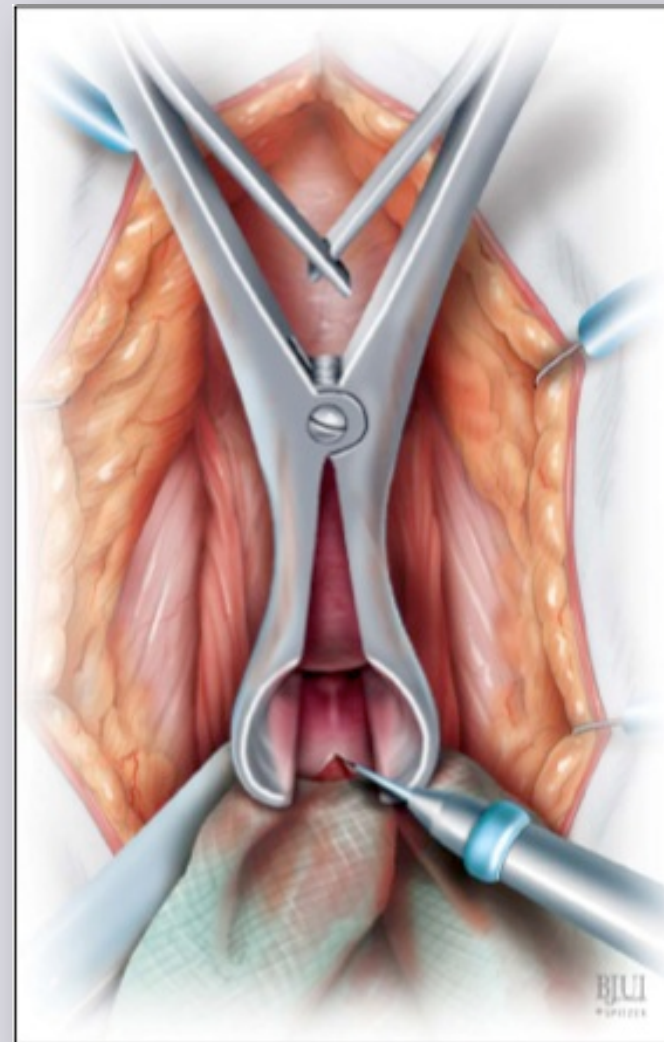


**Working around urethra may damage
innervation and blood supply**

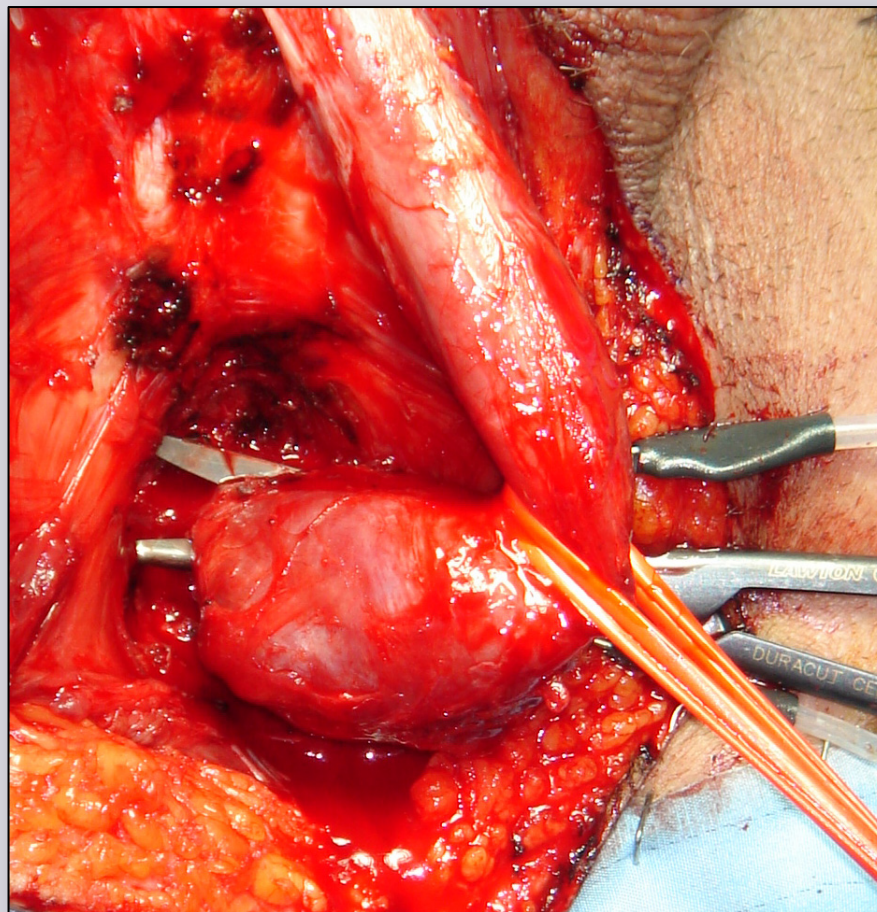
To avoid erectile dysfunction



**Work inside the urethra and
not around the urethra**

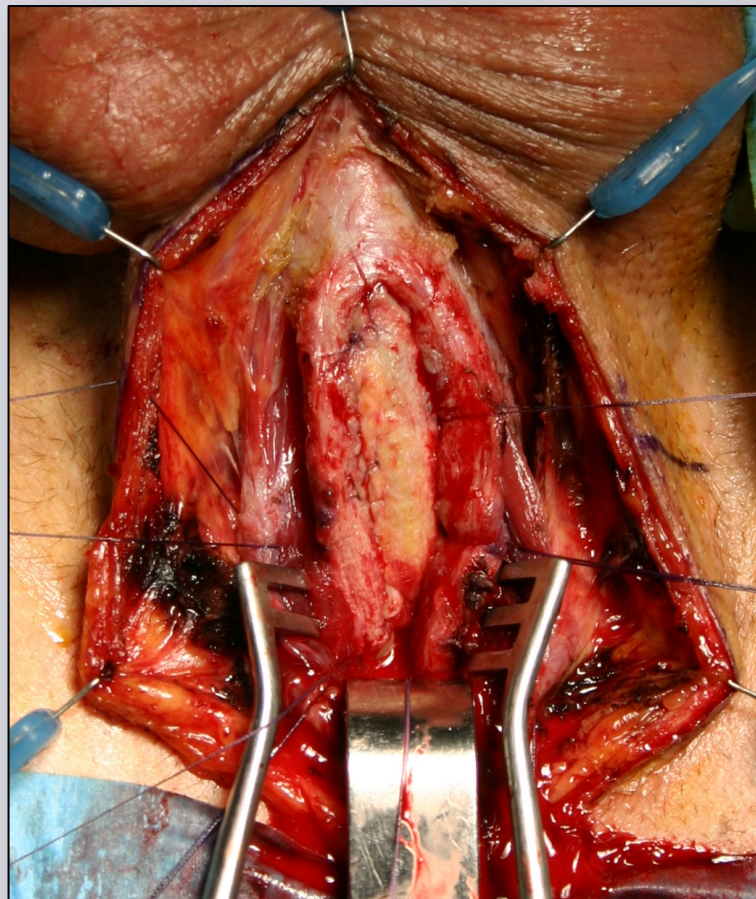


To avoid erectile dysfunction

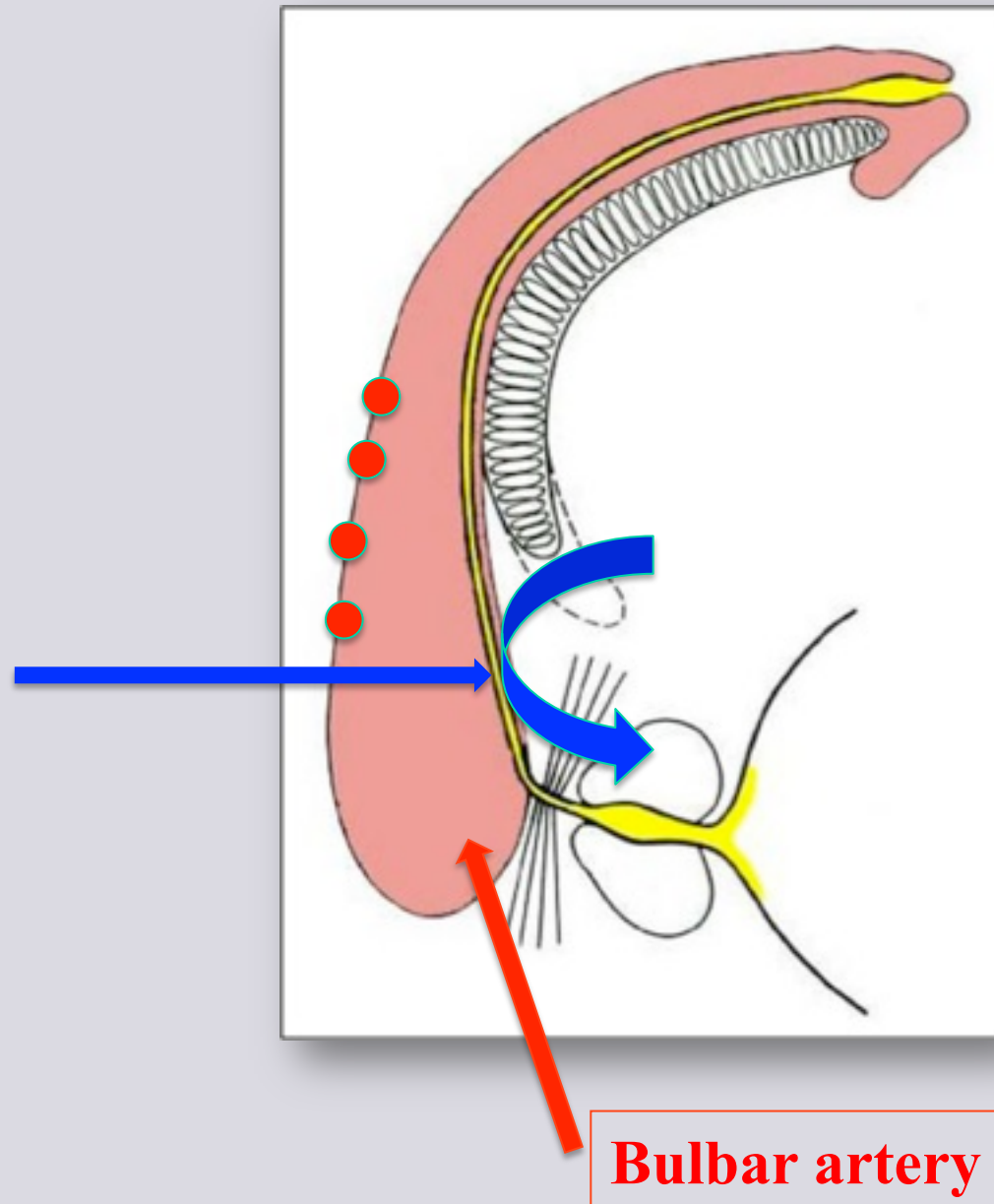


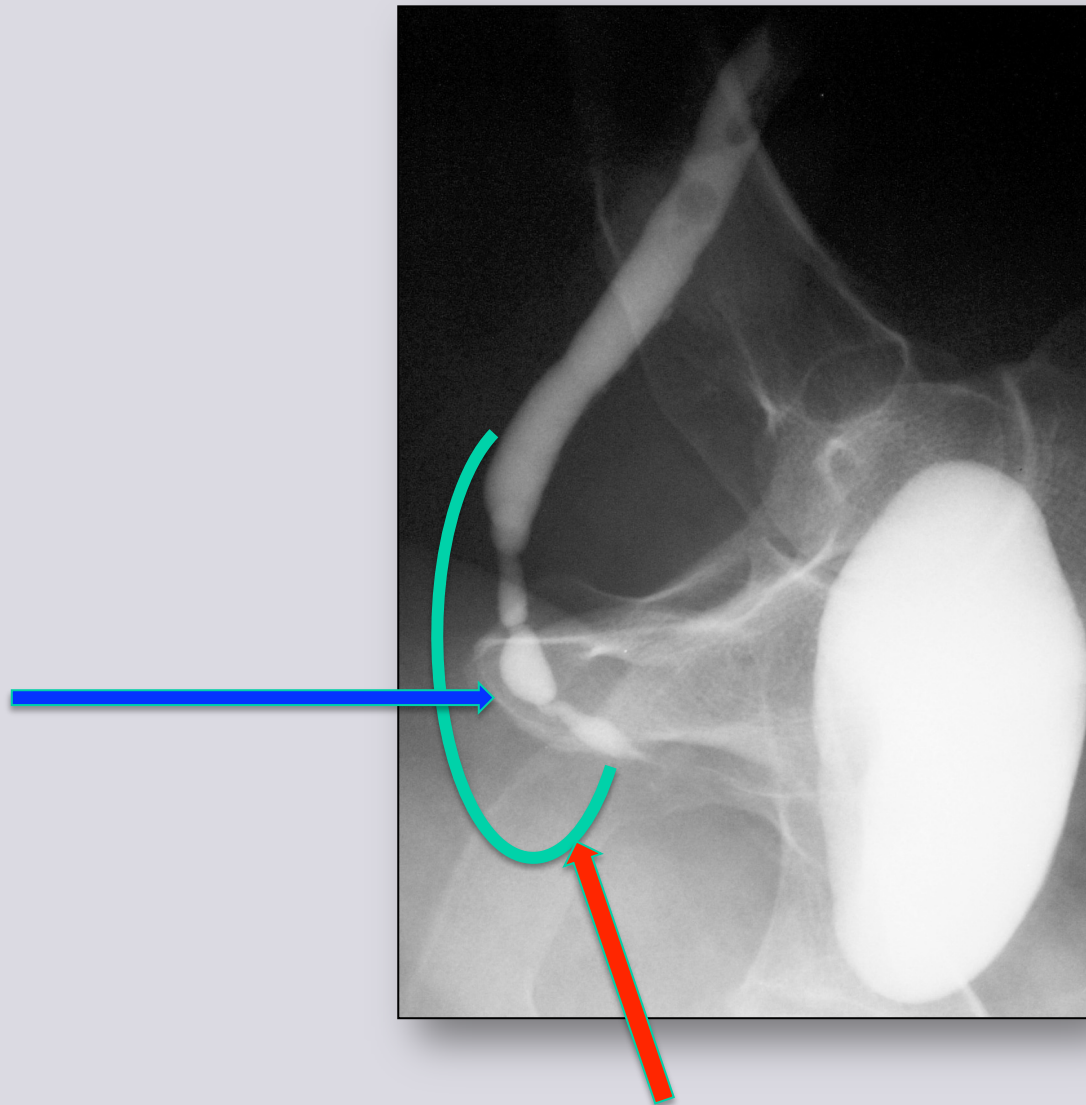
Dissection and/or urethral transection may cause ED

To avoid erectile dysfunction



Whenever possible use grafting rather than transecting technique





Bulbar artery

Conclusions

Sexual dysfunction may occur after open urethroplasty.



Knowledge of anatomy and physiology and adequate surgical strategies as well, may avoid it.



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