



Guido Barbagli

Center for Reconstructive Urethral Surgery

Arezzo - Italy

E-mail: info@urethralcenter.it

Website: www.urethralcenter.it

Complications of urethral surgery



Complication of urethral surgery

Positioning-related complications

Oral complications

Urinary function

Sexual function

Aesthetic appearance of genitalia



Positioning-related complications

Lower extremity neuropathy (sciatic, femoral, other)

Compartmental syndrome

Rhabdomyolysis

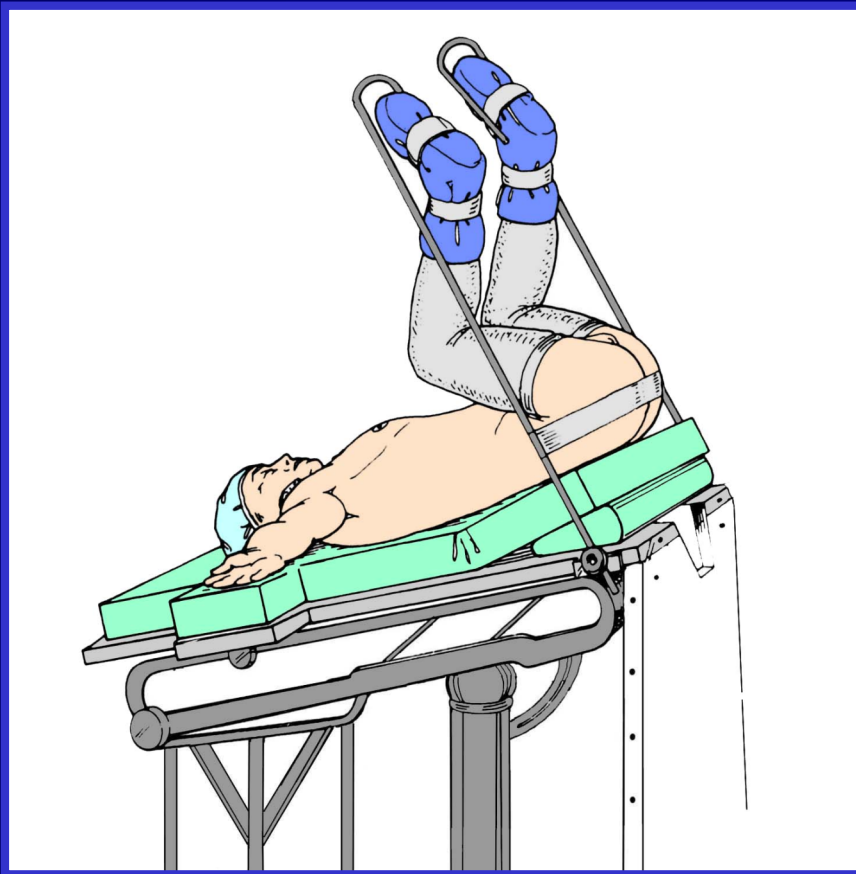
Peroneal nerve neuropraxia

Pulmonary embolism

Deep venous thrombosis



Positioning-related complications



Exaggerated lithotomy position



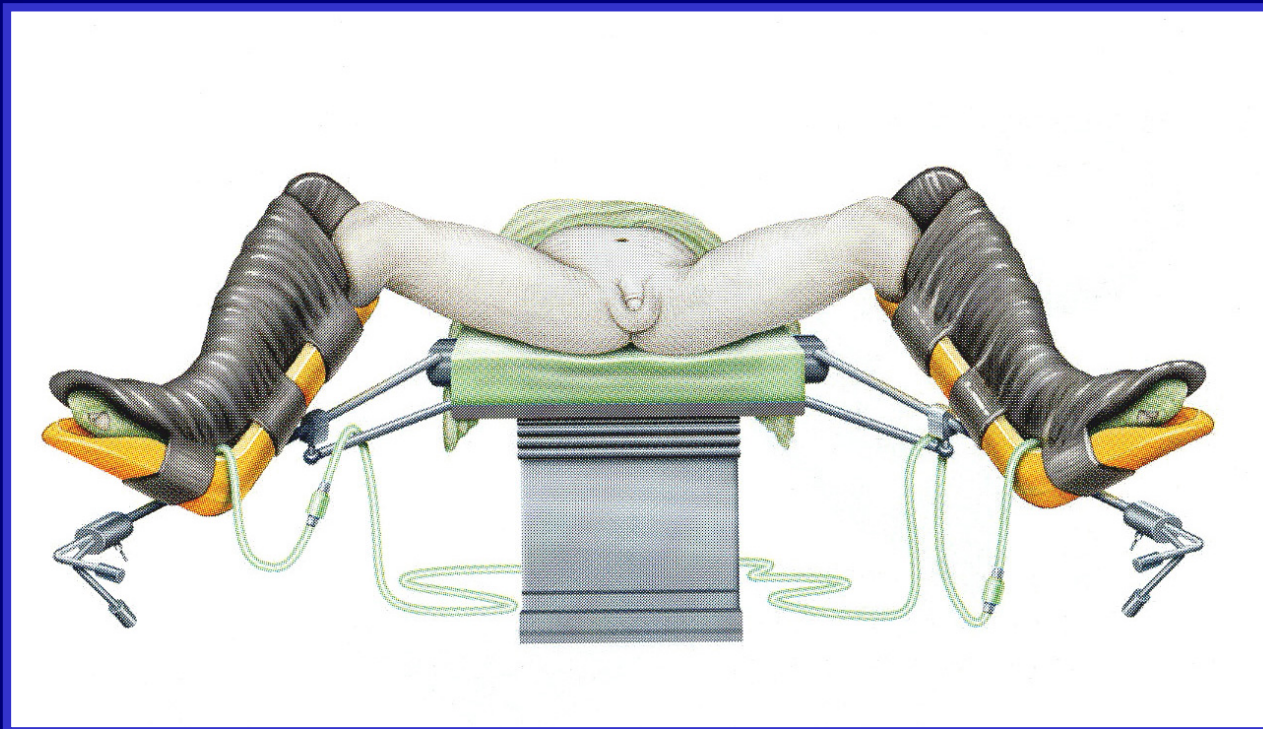
Positioning-related complications



Simple lithotomy position



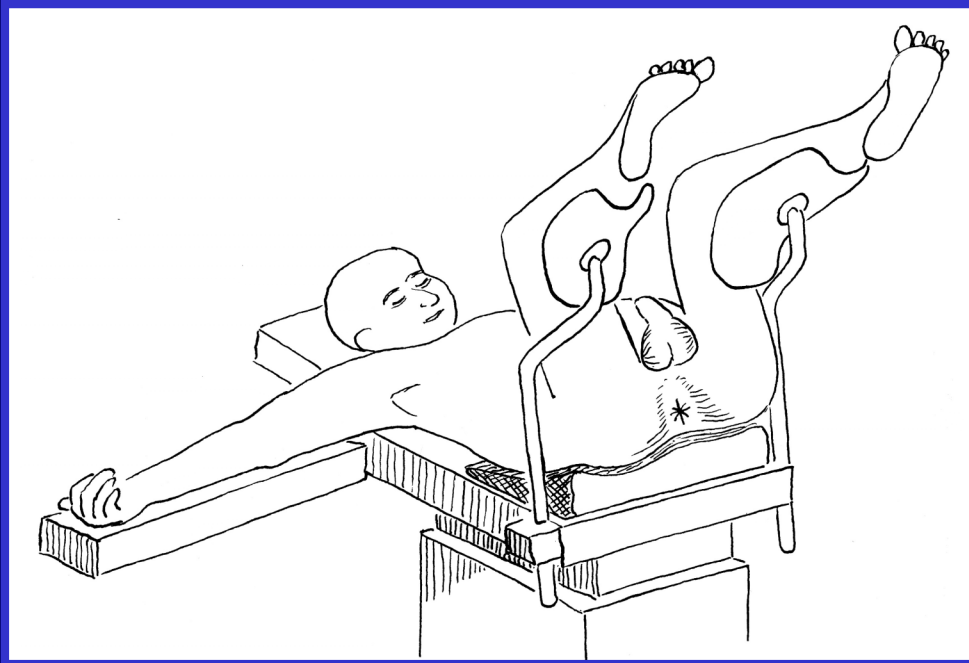
Positioning-related complications



Mundy's social position



Positioning-related complications



Standard stirrups



Positioning-related complications



Allen stirrups



Positioning-related complications



Sequential inflatable compression sleeves



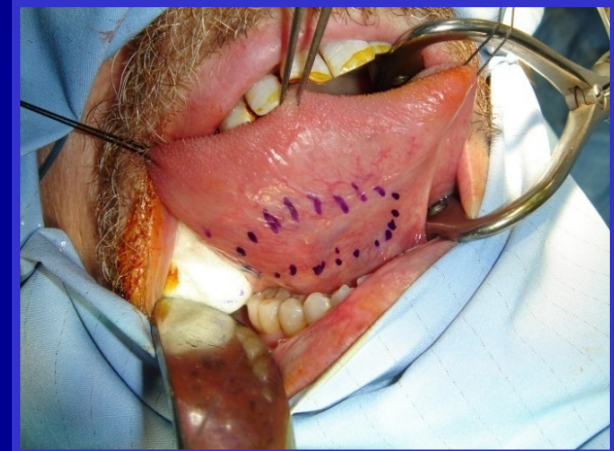
Oral complications



cheek



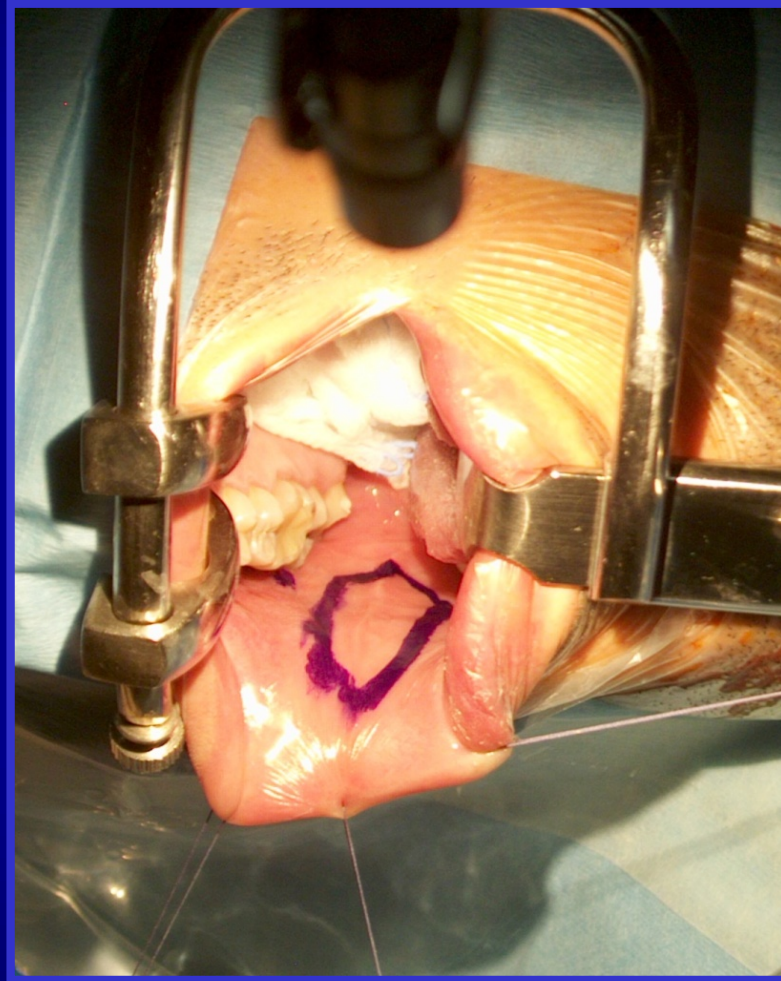
lip



tongue



Oral complications



**Evaluation of early and late complications and
patient satisfaction in 300 patients who underwent
oral graft harvesting from a single cheek using a
standard technique in a Referral Centre experience**

Barbagli G. et al., AUA 2009 Meeting, Chicago, USA



Early complications

bleeding: 3.6%

pain: score 0 (35.2%), score 1 (46.8%),
score 2 (16.9%), score 3 (1.6%)

swelling: score 0 (16.8%), score 1 (49.2%),
score 2 (33.2%) and score 3 (0.8%)

use of anti-inflammatory drugs: 5.2%



Early complications

52% of patients were able to resume a normal diet within 3 days

36% of patients were able to resume a normal diet within 6 days

12% of patients were able to resume a normal diet within 10 days



Late complications

infection: 1.6%

perioral numbness: for one week (68%), for one month (27.6%), for three months (4.4%)

discomfort related to the tightness of suture closure:
score 0 (41.2%), score 1 (44.4%),
score 2 (13.2%), score 3 (1.2%)

discomfort due to mouth scar: score 0 (81.6%),
score 1 (14.8%), score 2 (3.6%)



Late complications

difficulty with mouth opening: score 0 (98%), score 1 (1.6%)

difficulty to smile: score 0 (99%), score 2 (1%)

changes in face physiognomy: score 0 (99%)



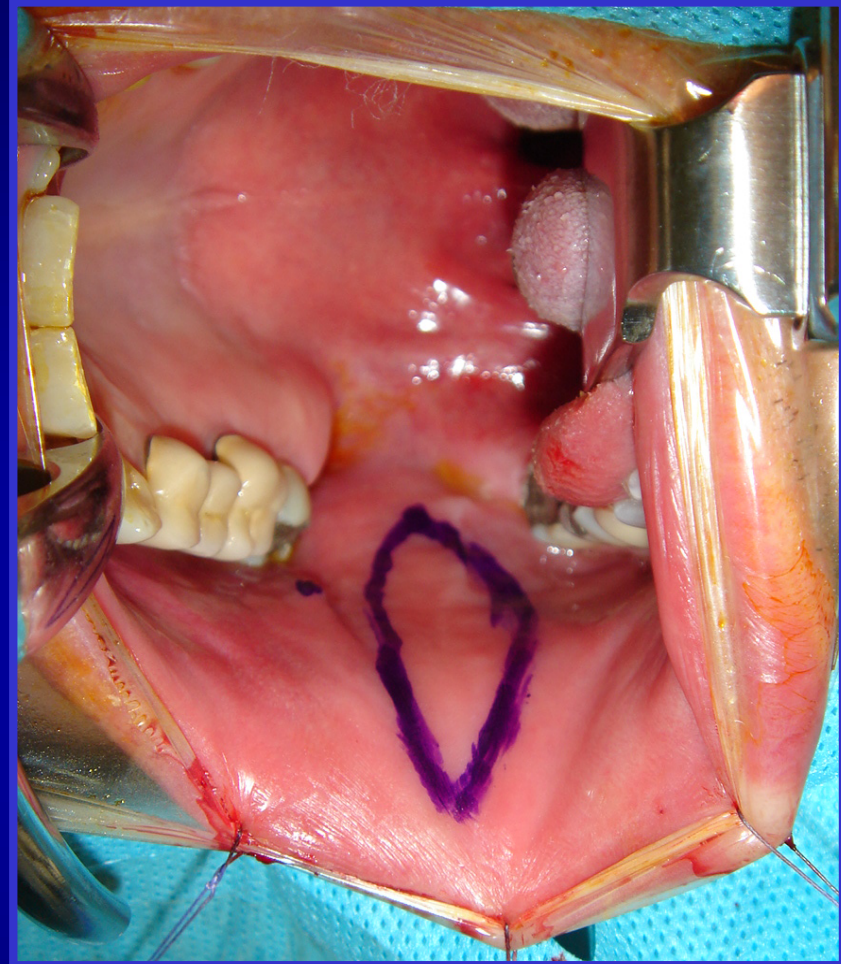
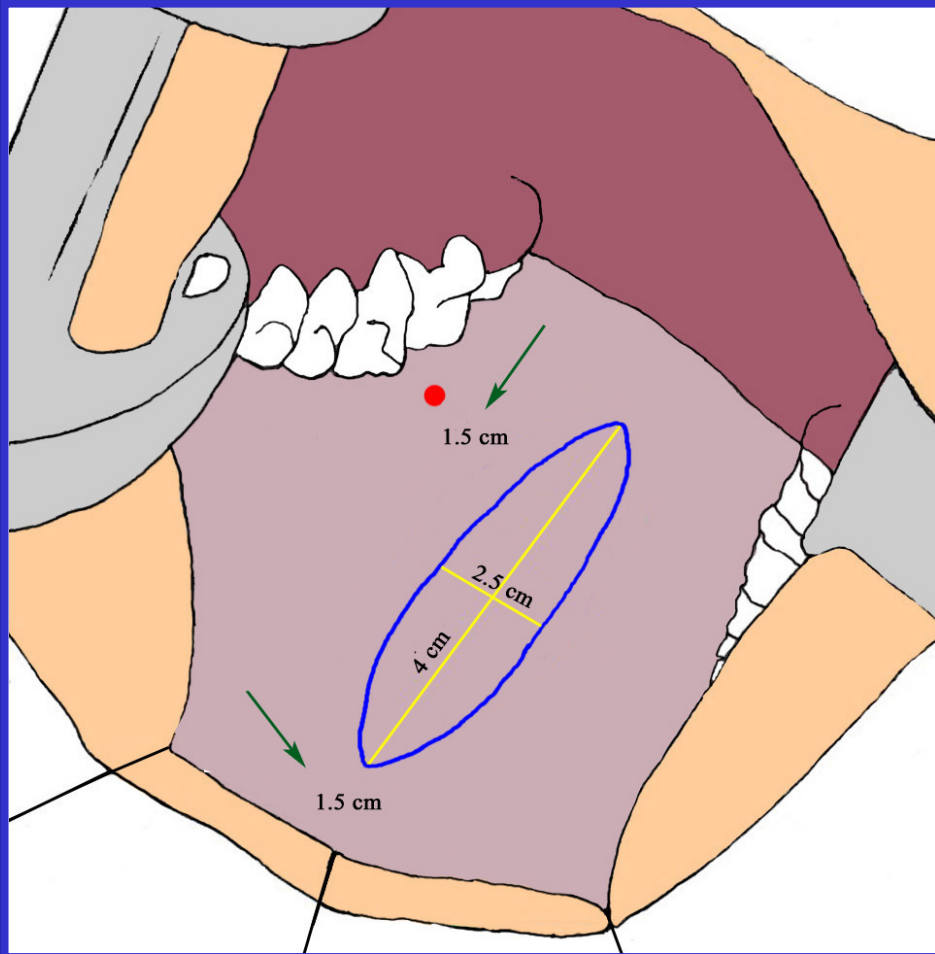
Patient satisfaction

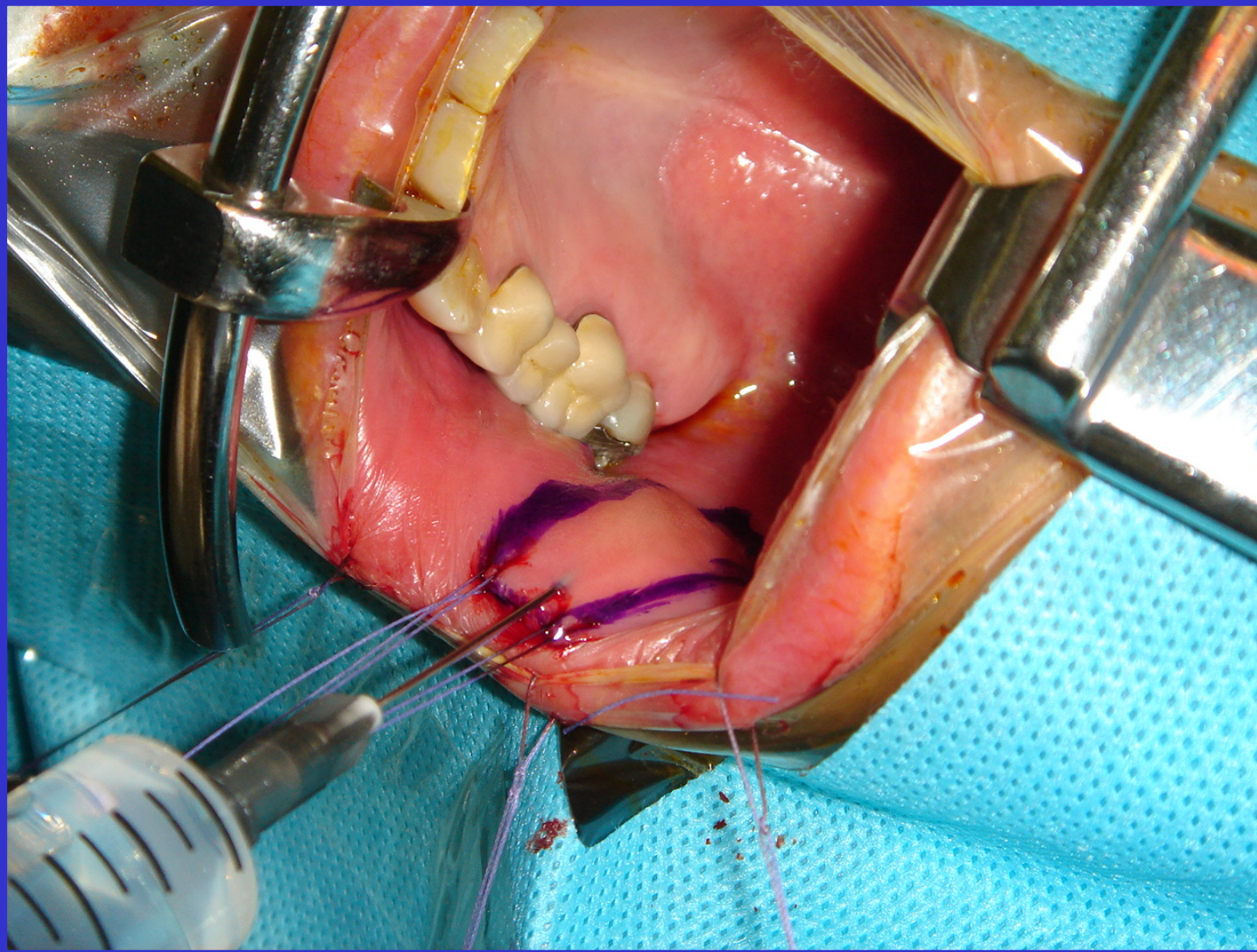
“ Would you do this type of operation again? ”

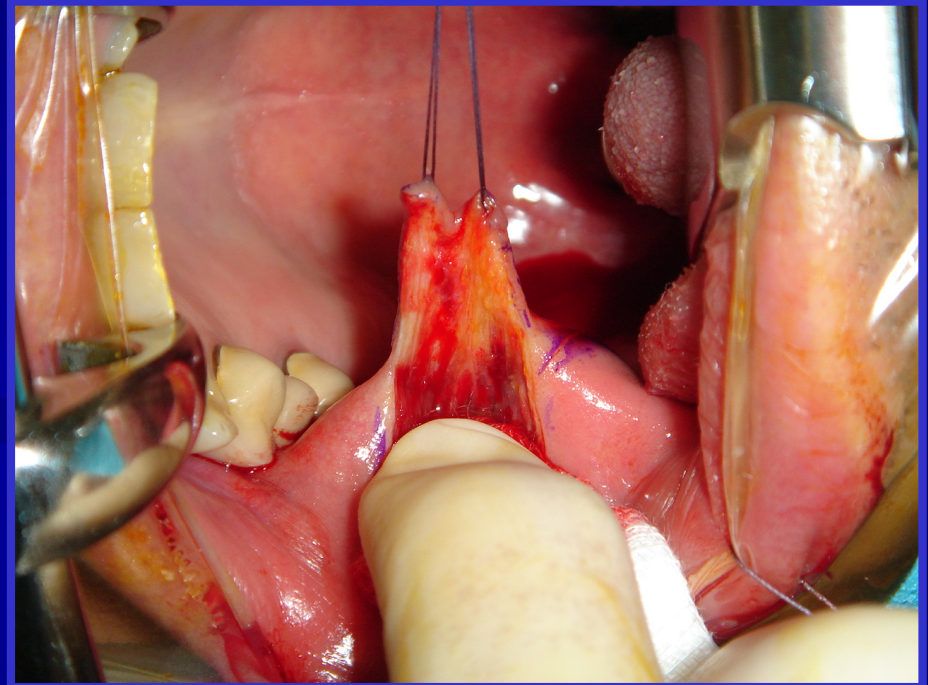
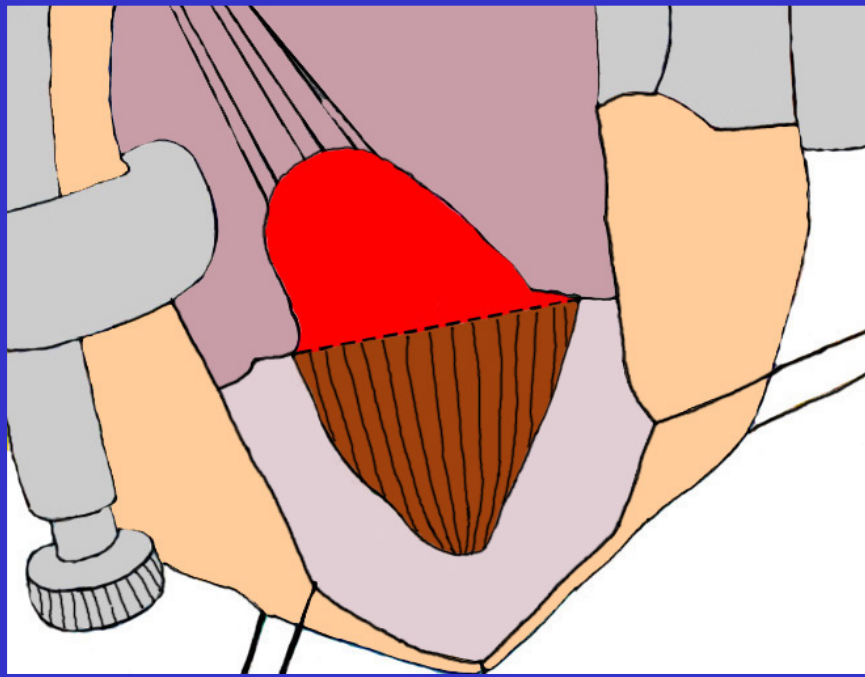
Yes : 98.4% of patients

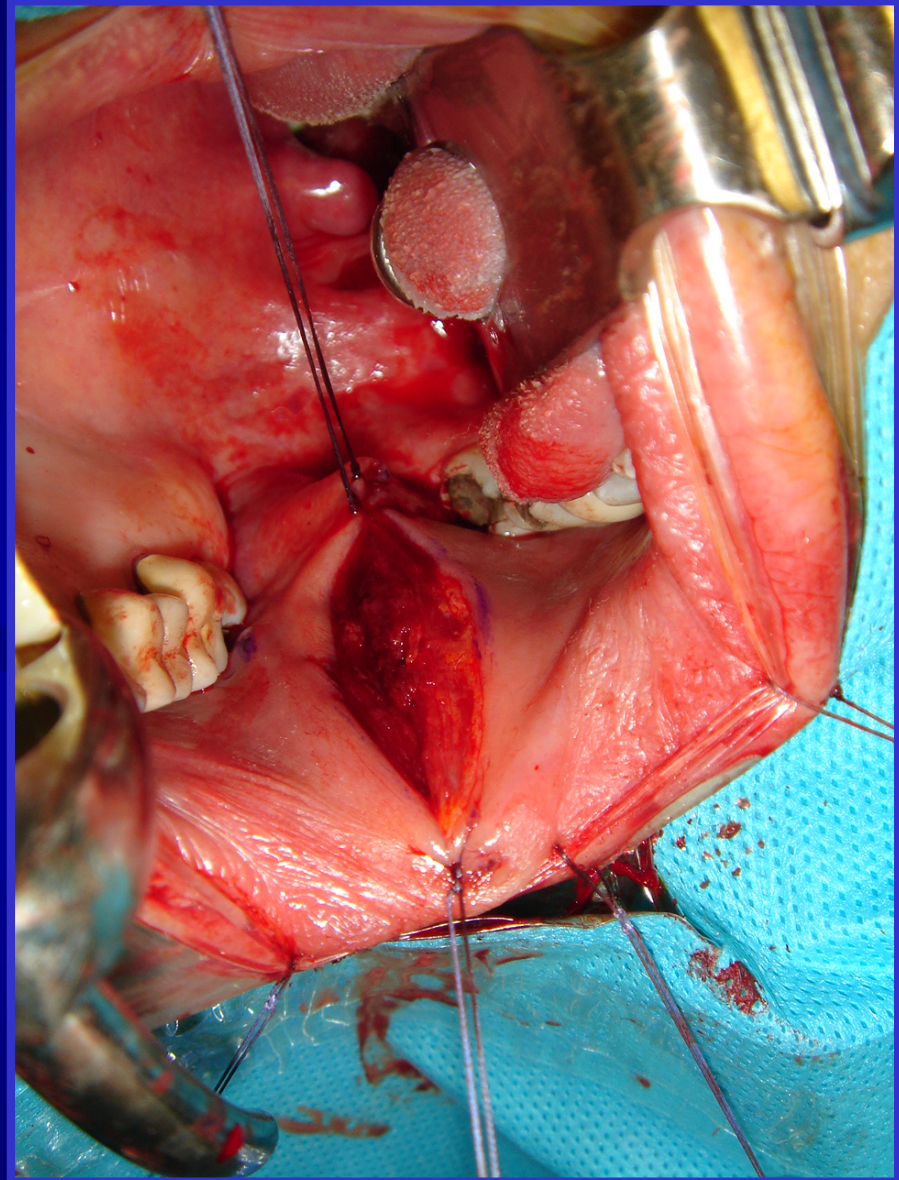
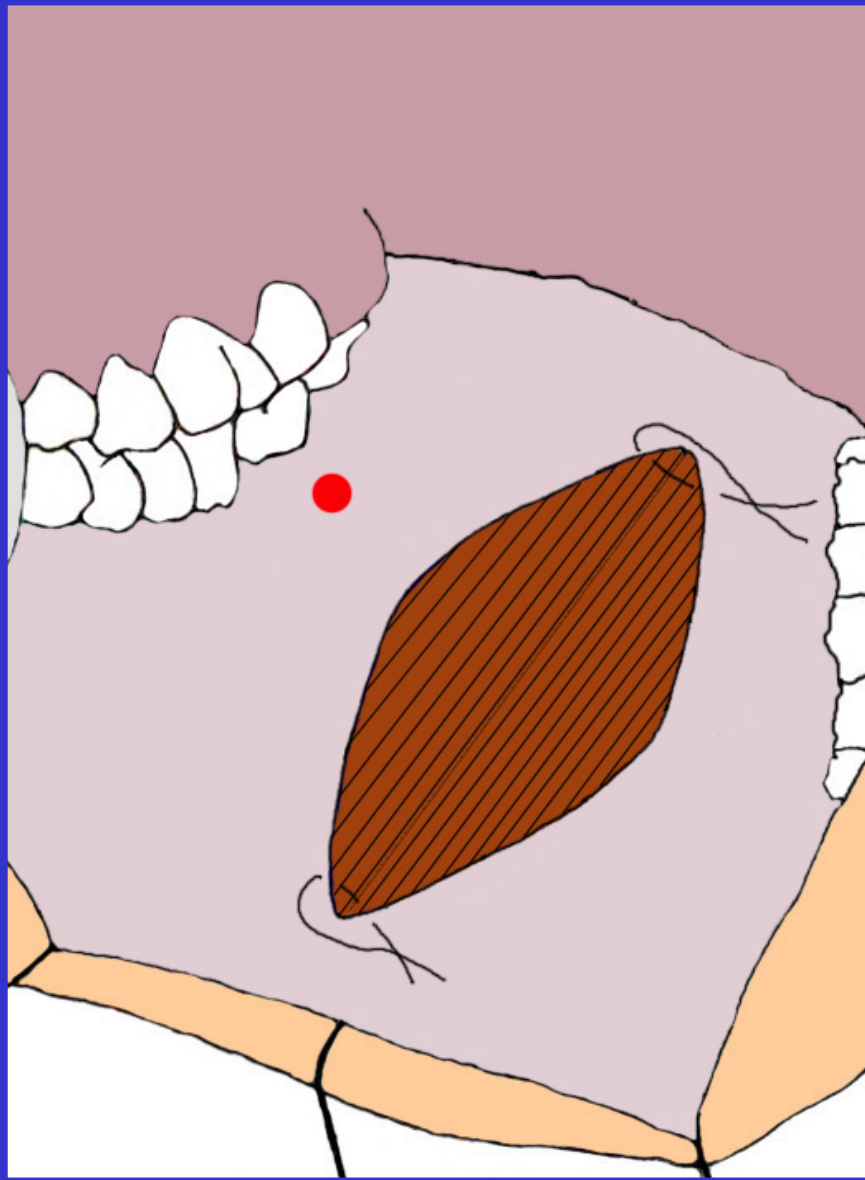
No : 1.6% of patients

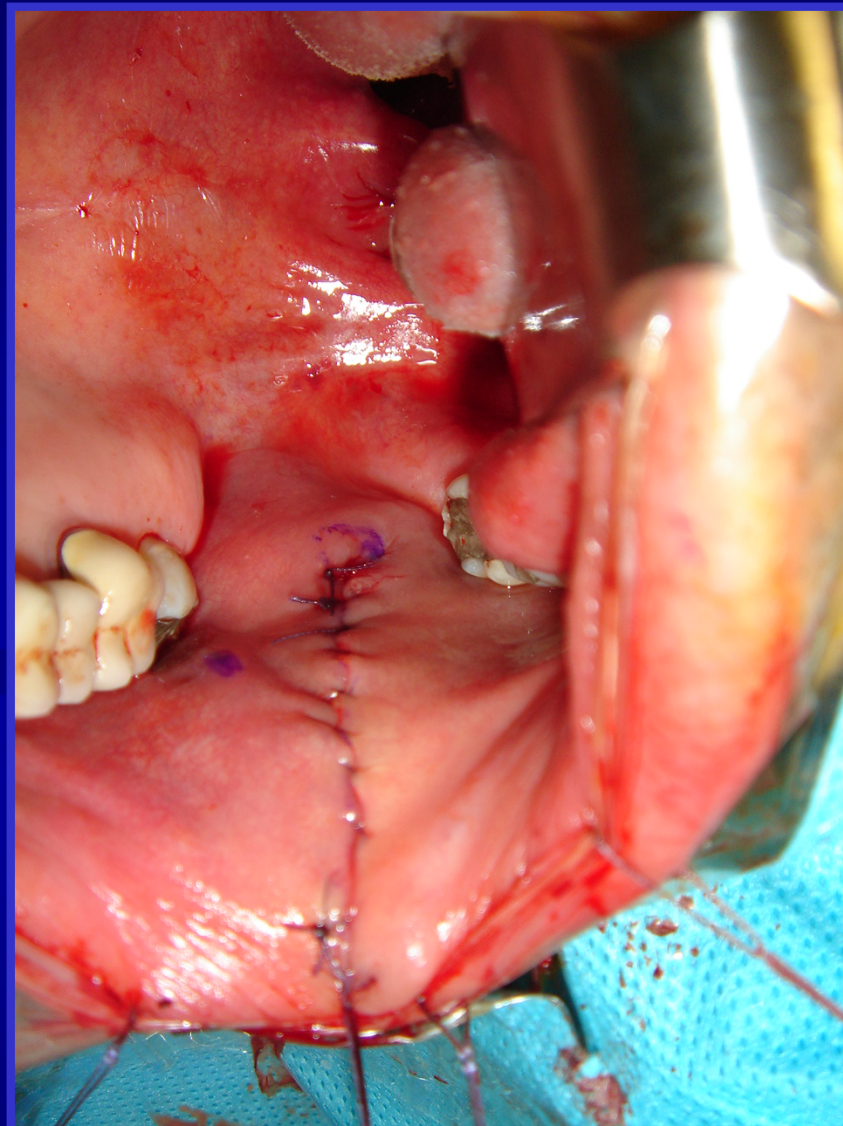
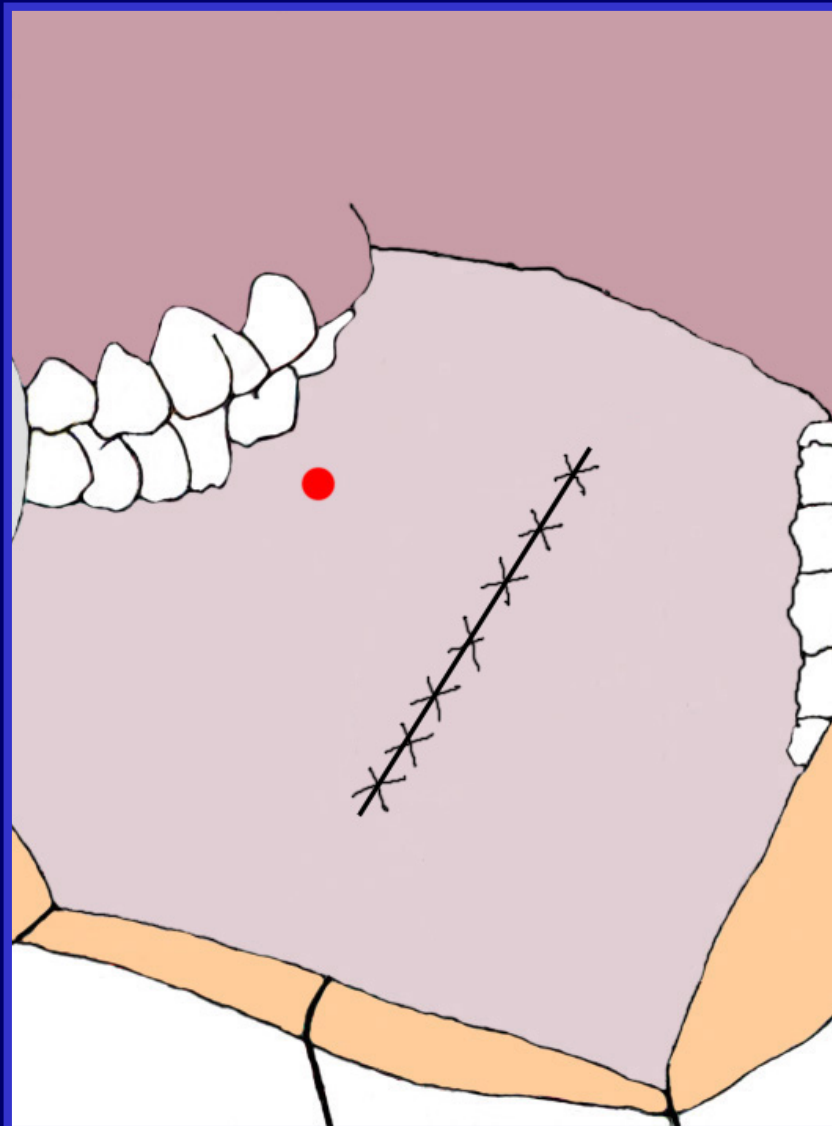














4 cm



6 cm





Lip harvest



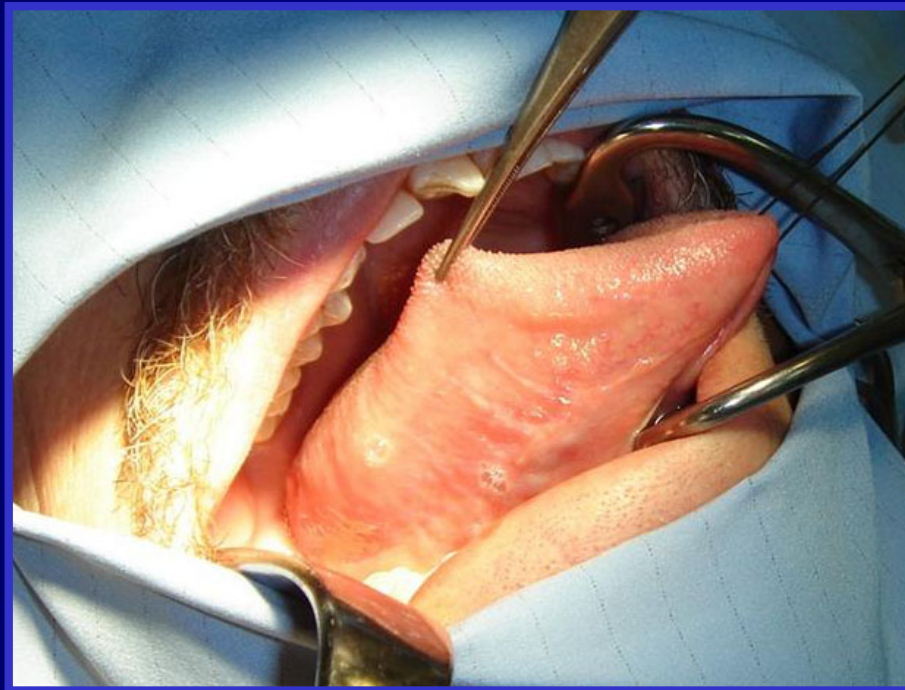
Negative aesthetic consequences

Unsatisfactory postoperative patient acceptance



Tongue harvest

The tongue could represent a good harvesting site as an alternative to the cheek



No postoperative
significant
complications

Few reports in the literature

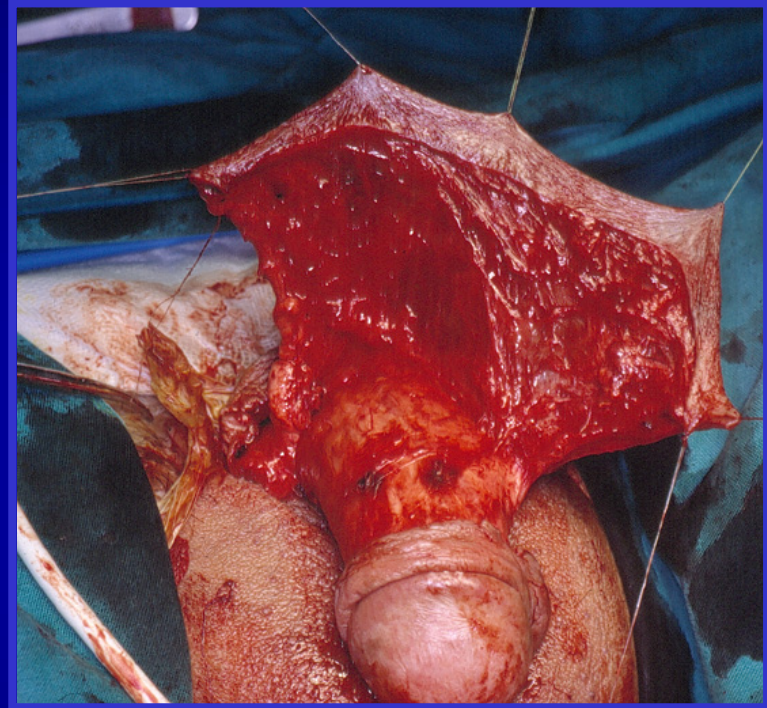


Complications of penile urethroplasty

Urinary function

Sexual function

Aesthetic appearance of genitalia



Complications following flap urethroplasty



penile haematoma



skin necrosis



fistula



penile-glans torsion



sacculation



Complications following graft urethroplasty



infection



meatal stenosis



fistula



Complications following the first stage of urethroplasty

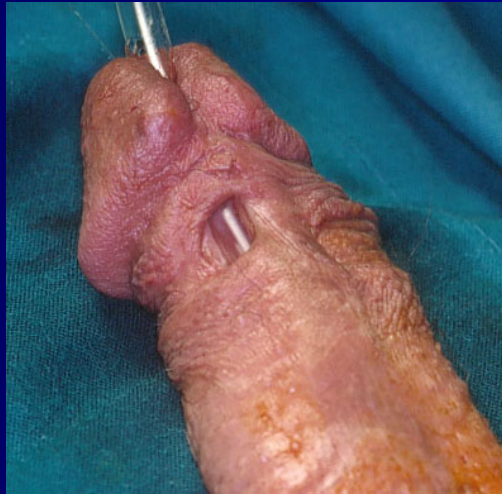


10-39% of patients showed contracture or scarring of the initial graft, requiring new grafting procedures

Barbagli et al., Eur Urol, 2006



Complications following the second stage of urethroplasty



fistula



glans dehiscence



meatal stenosis

30% of patients showed complications following the second stage of urethroplasty, requiring surgical revision

Barbagli et al., Eur Urol 2006



Complications of bulbar urethroplasty

Urinary function



Sexual function





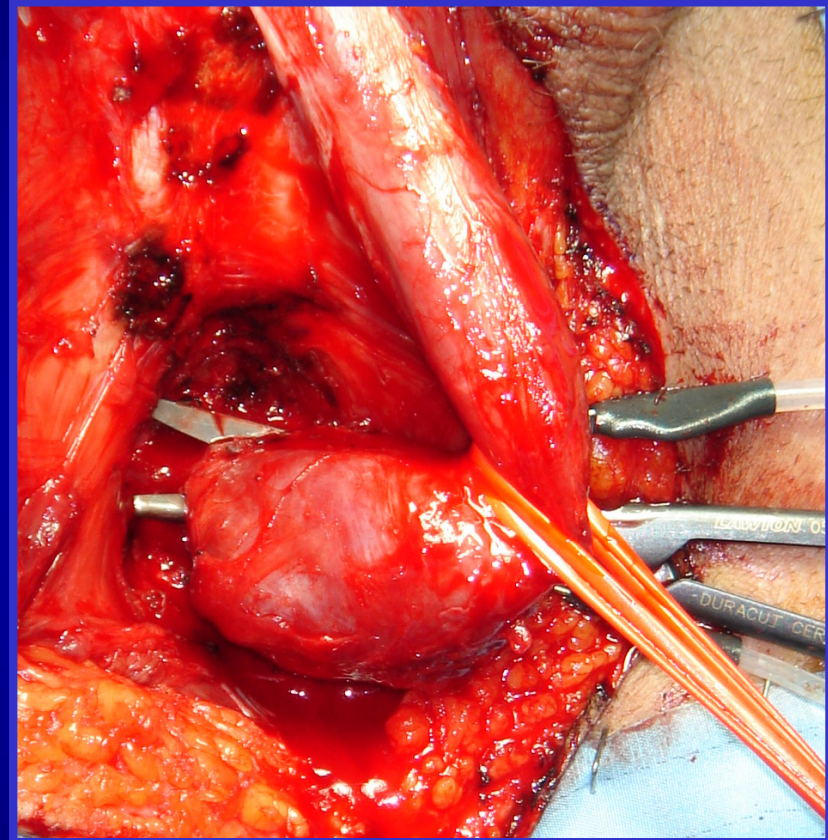
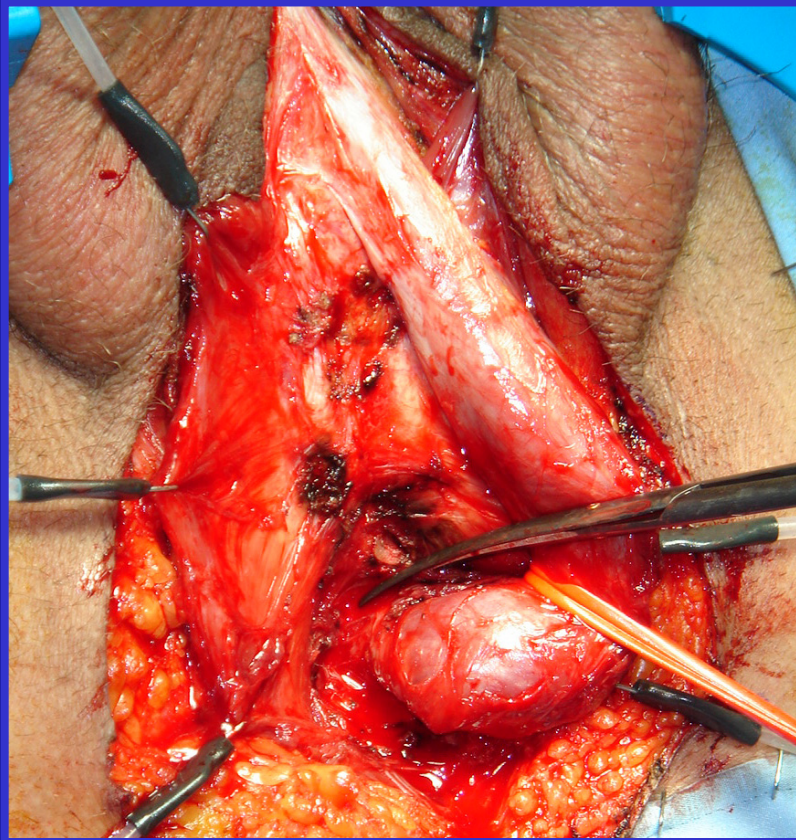
fistula



sacculation



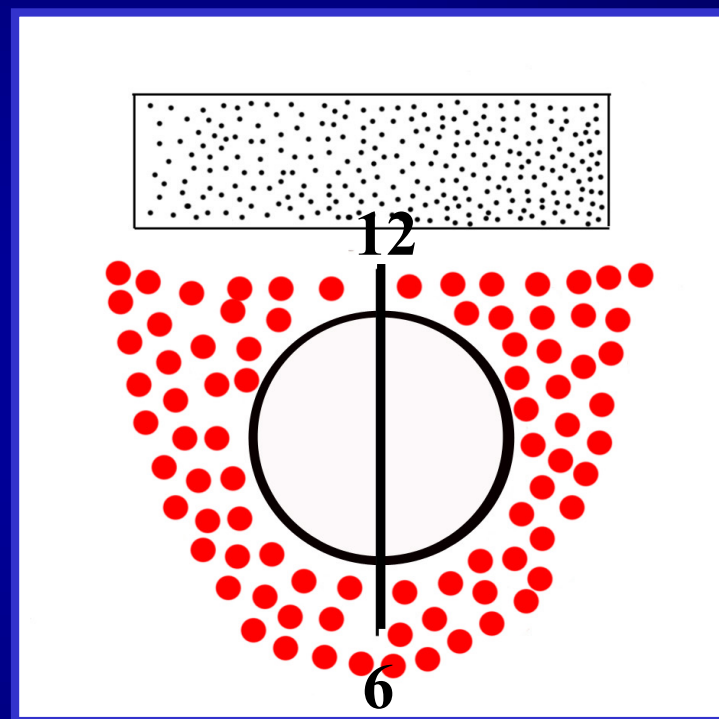
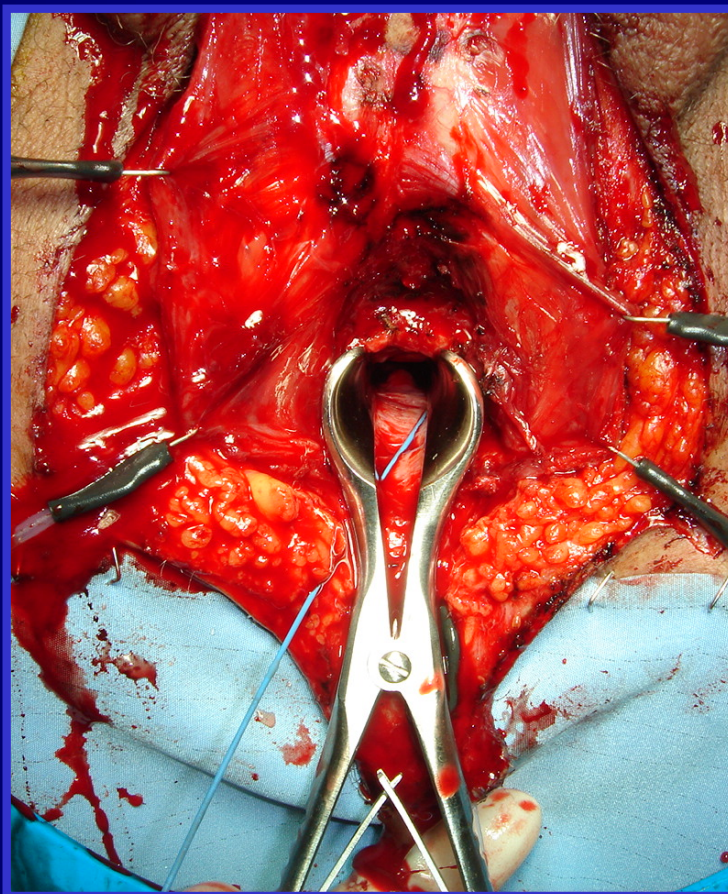
Complications of bulbar urethroplasty



Impotence ?



Complications of bulbar urethroplasty

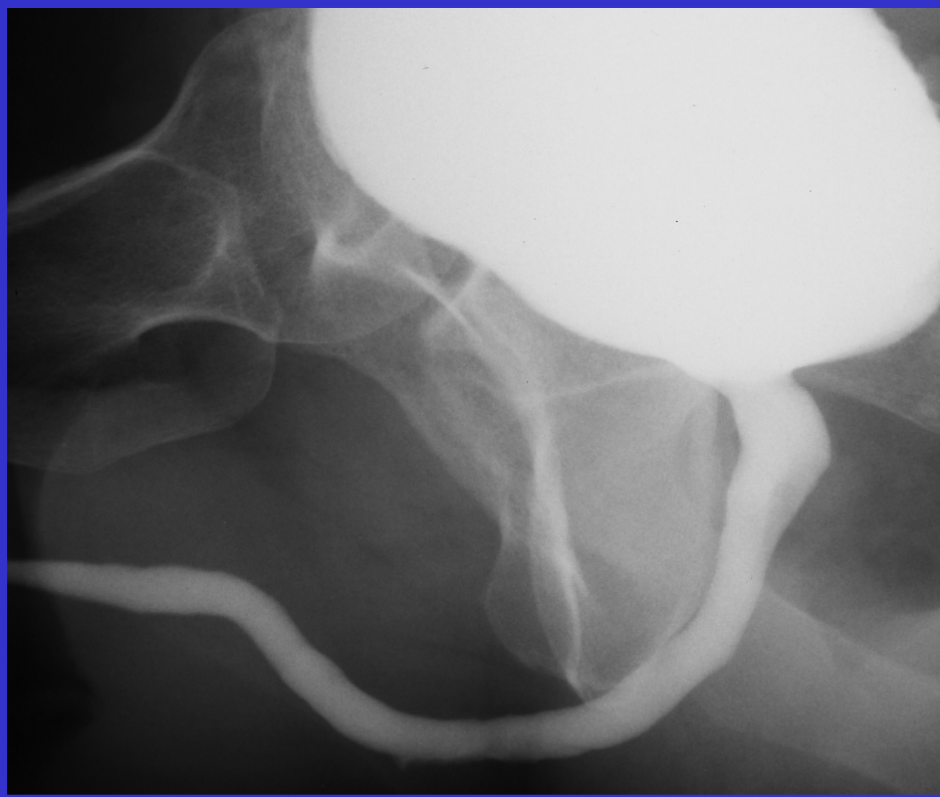


Impotence ?



End-to-end anastomosis

Substitution urethroplasty



post-voiding dribbling

loss of ejaculation

**semen sequestration in the
urethral bulb**



In our experience, out of 60 patients who underwent end-to-end anastomosis:

12 (20%) showed decreased ejaculation force

2 (3.3%) showed ejaculation was possible only by manually compressing the perineum at the level of the urethral bulb

Barbagli G. et al, J Urol 2007, 178: 2470-2473



In our experience, the patients who underwent substitution onlay graft urethroplasty showed the same incidence of:

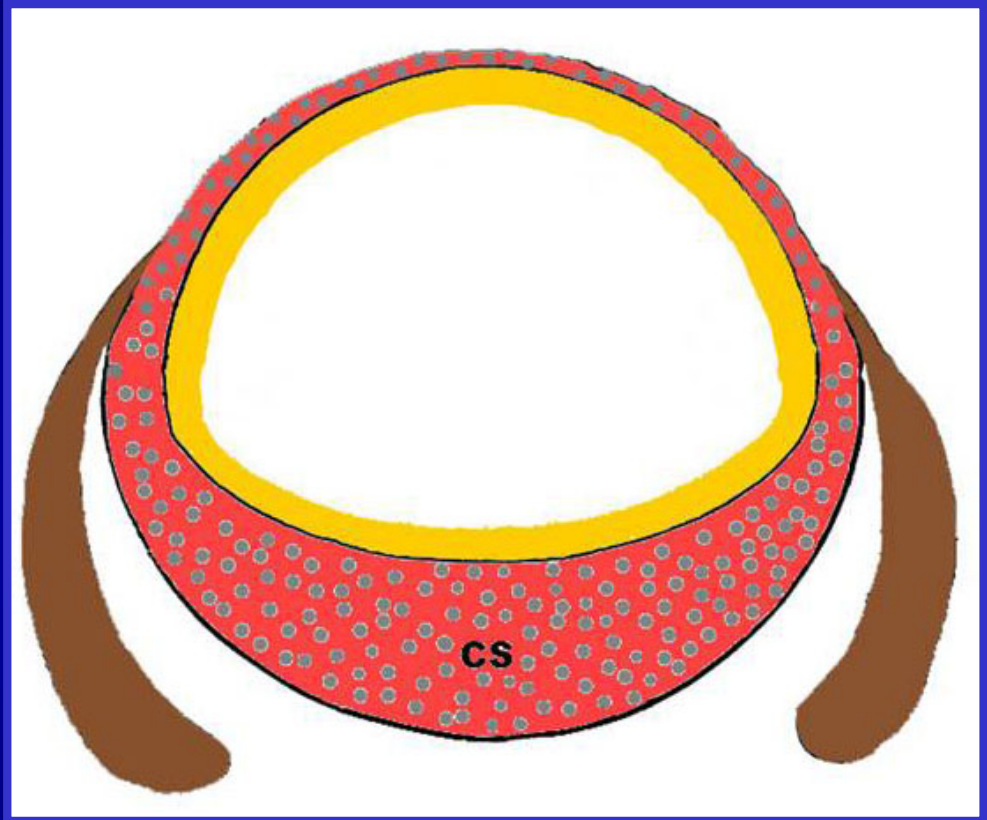
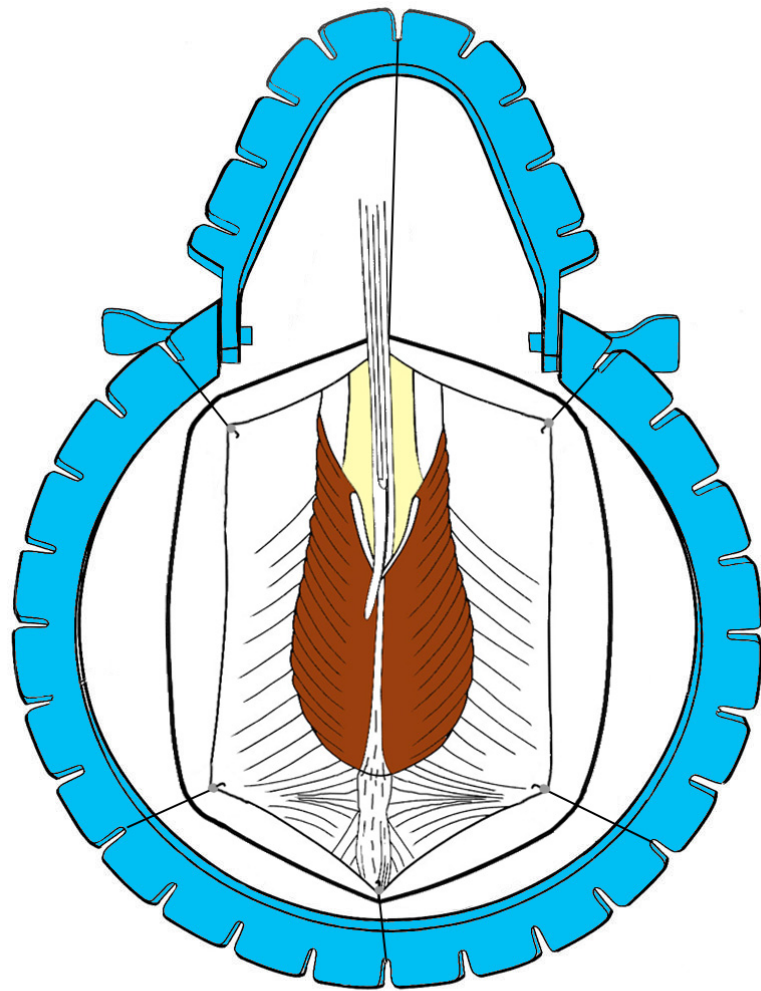
- **post-voiding dribbling**
- **decreased ejaculation force or loss of ejaculation**
- **partial semen sequestration in the urethral bulb**

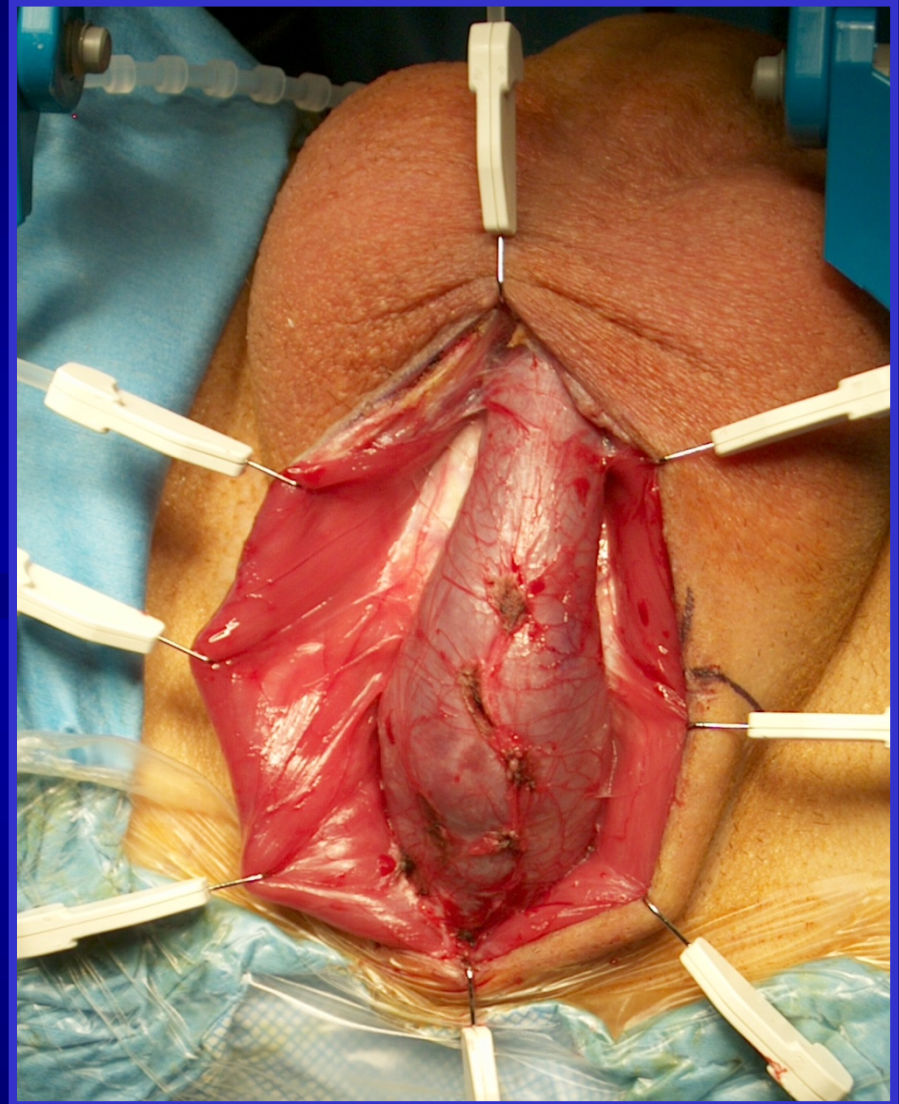
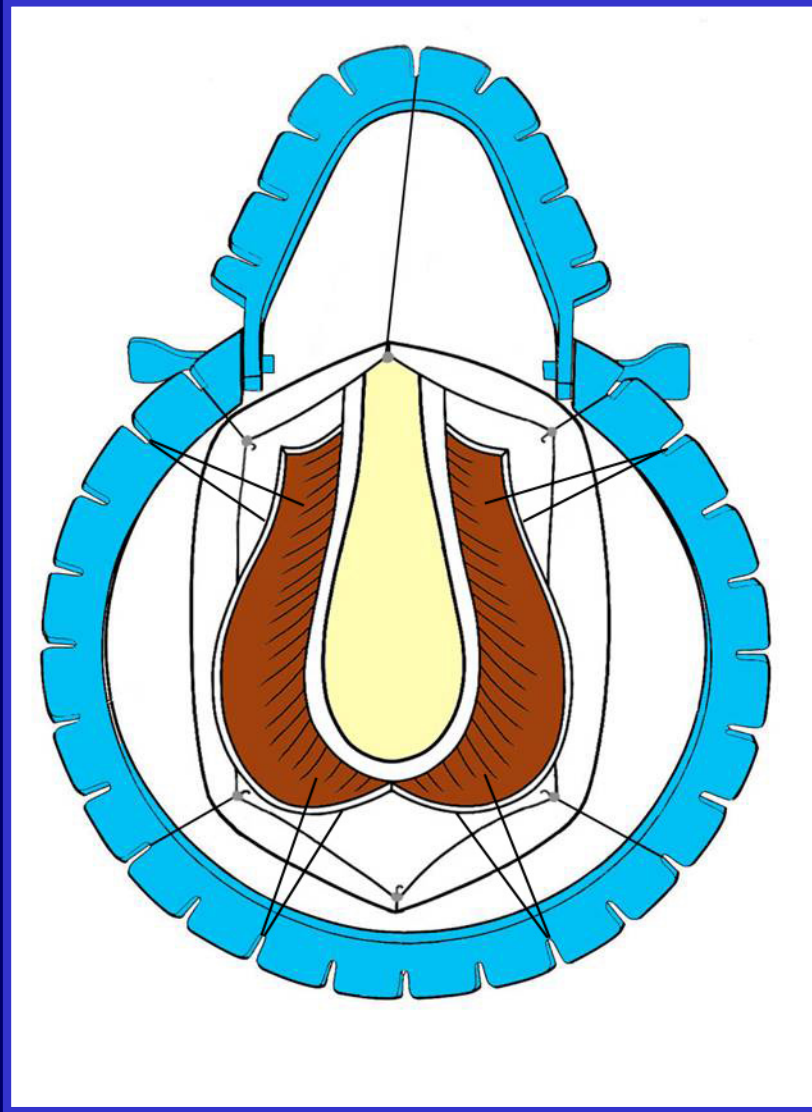
Barbagli G. et al, Eur Urol 2007, 54: 335-343

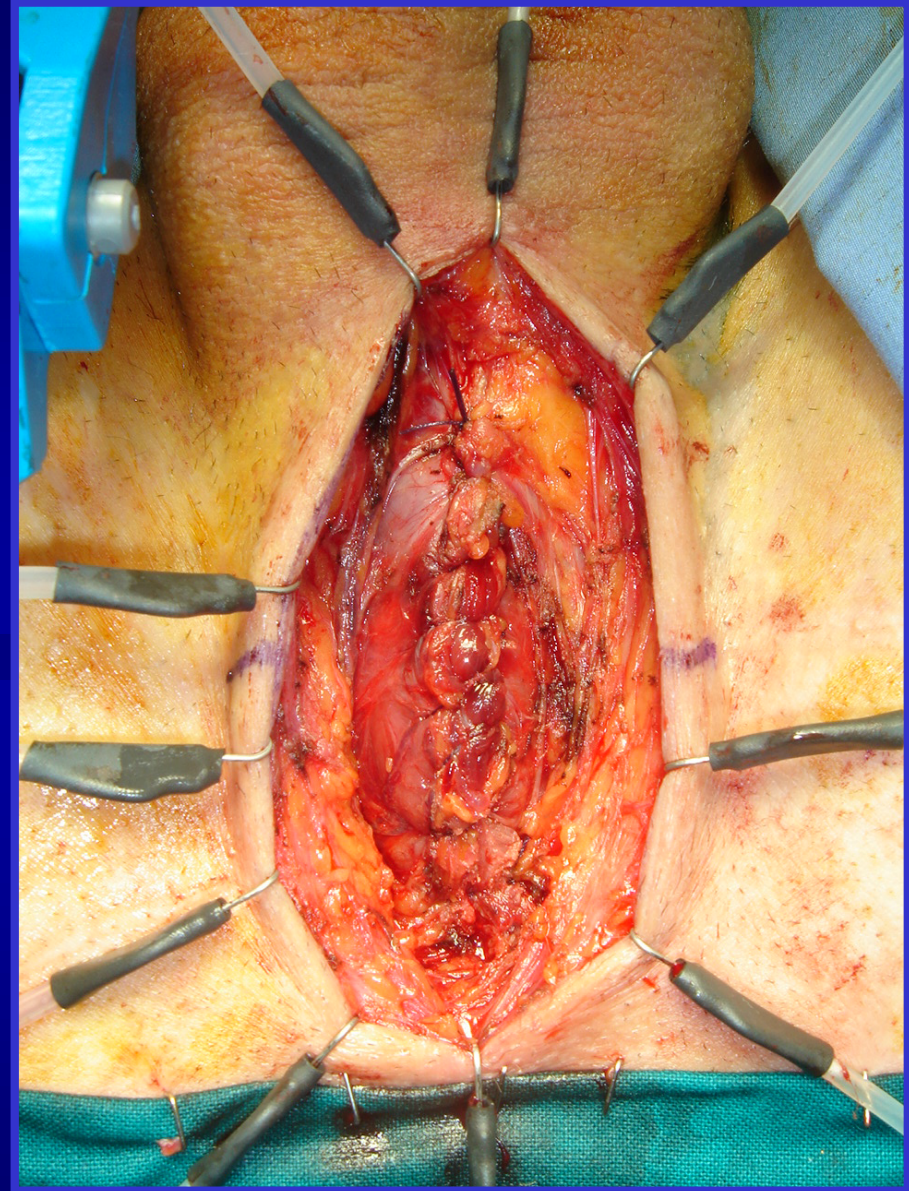
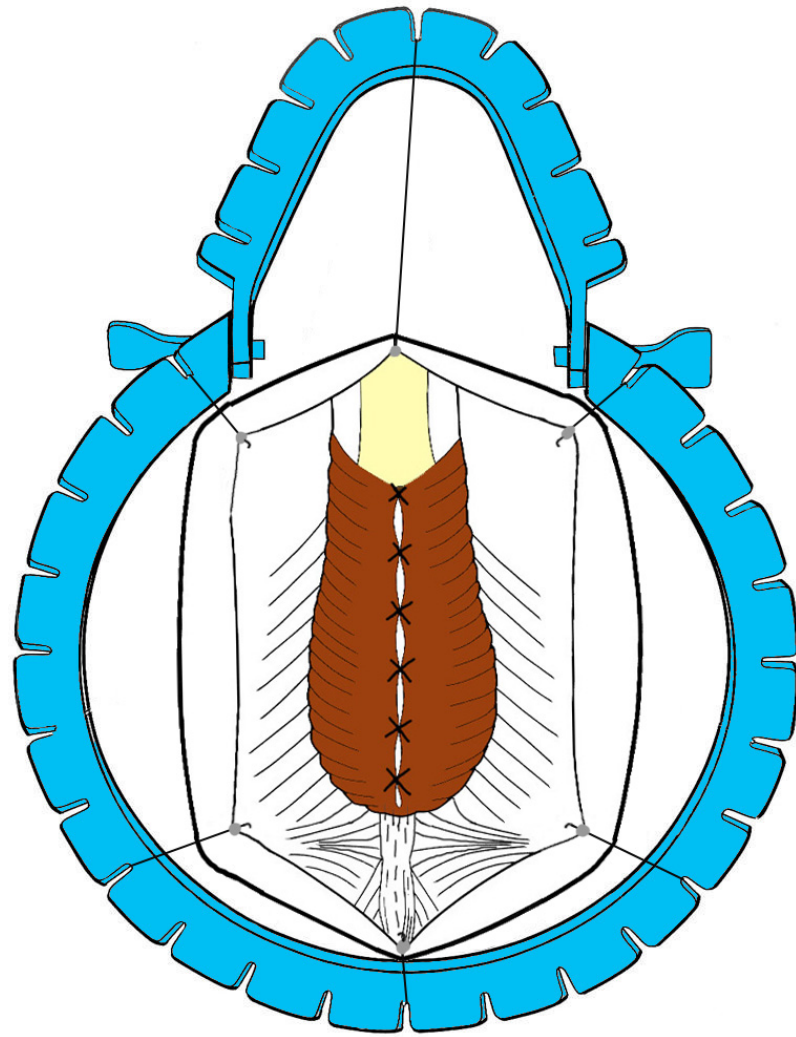


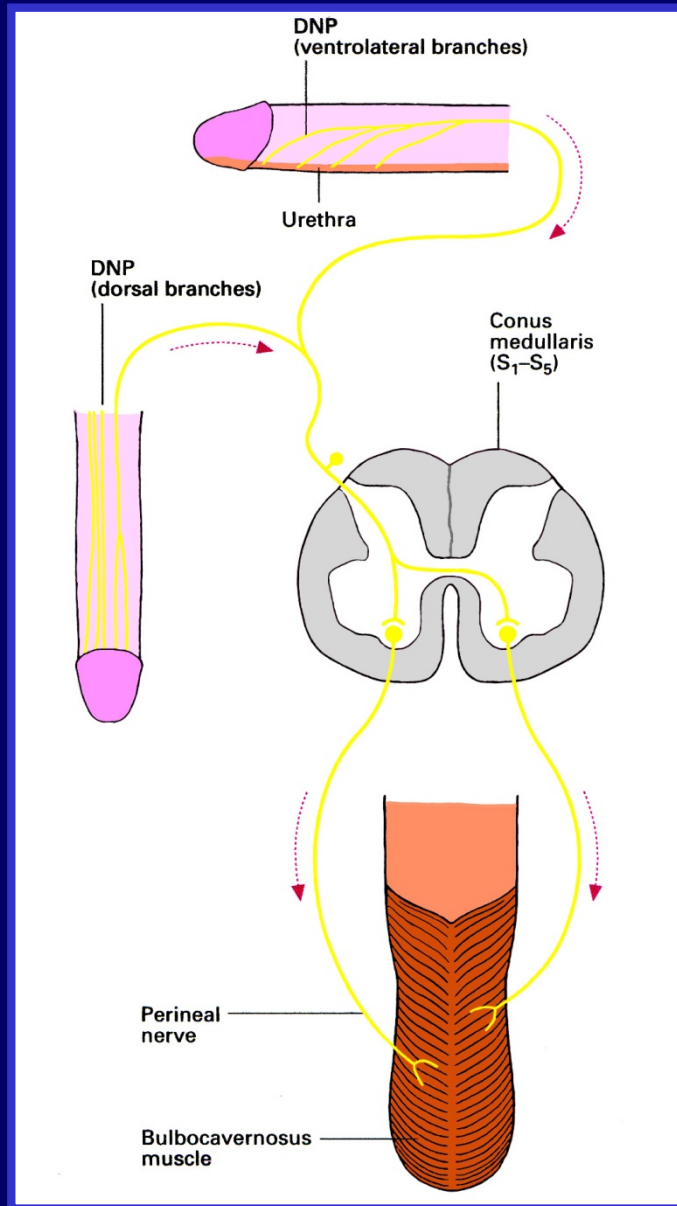
Why ?







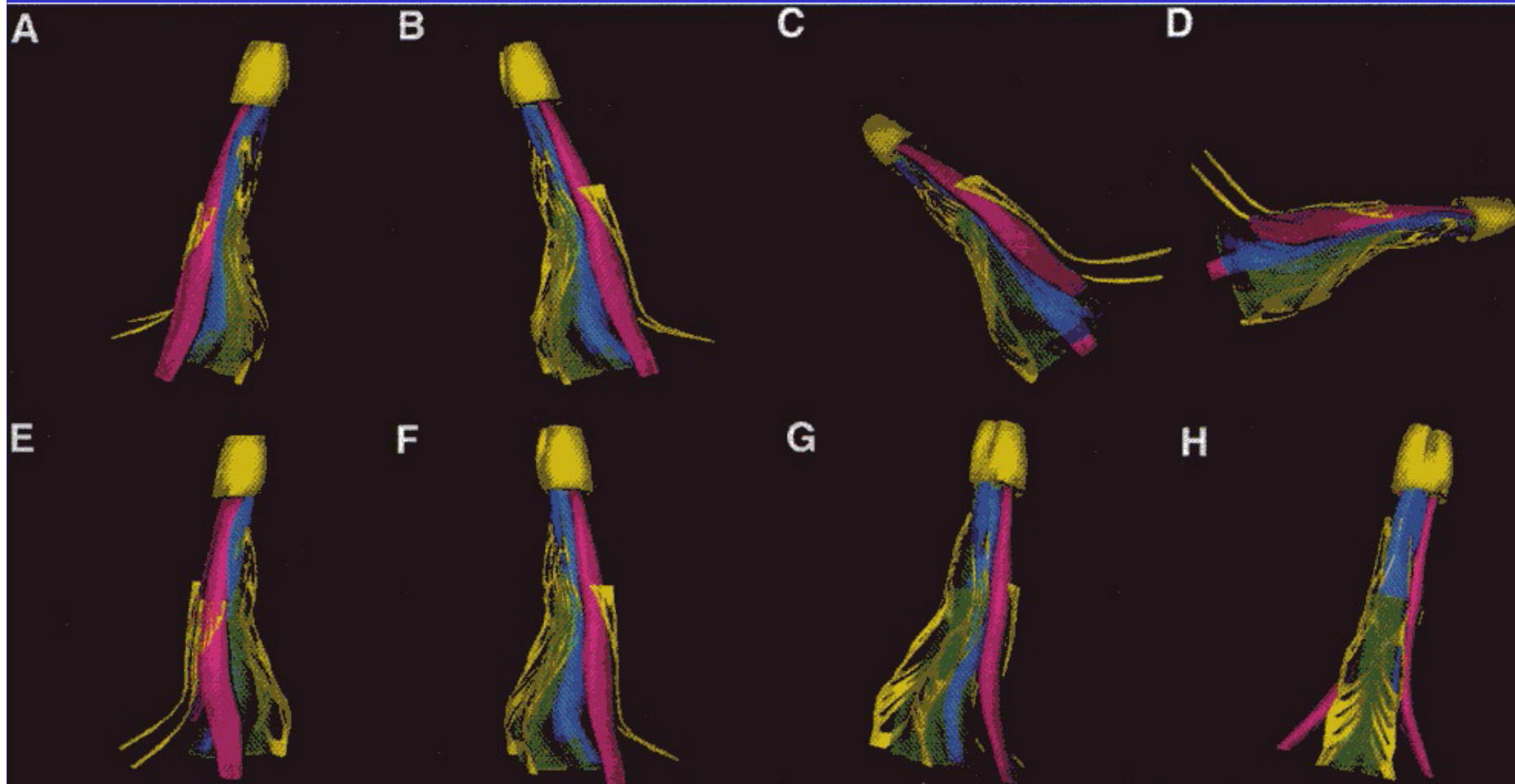




Rhythmic contractions of the bulbo-spongiosum muscles and other perineal muscles expel semen from the urethra and have an important role in expelling urine, avoiding urine sequestration in the large urethral bulb.

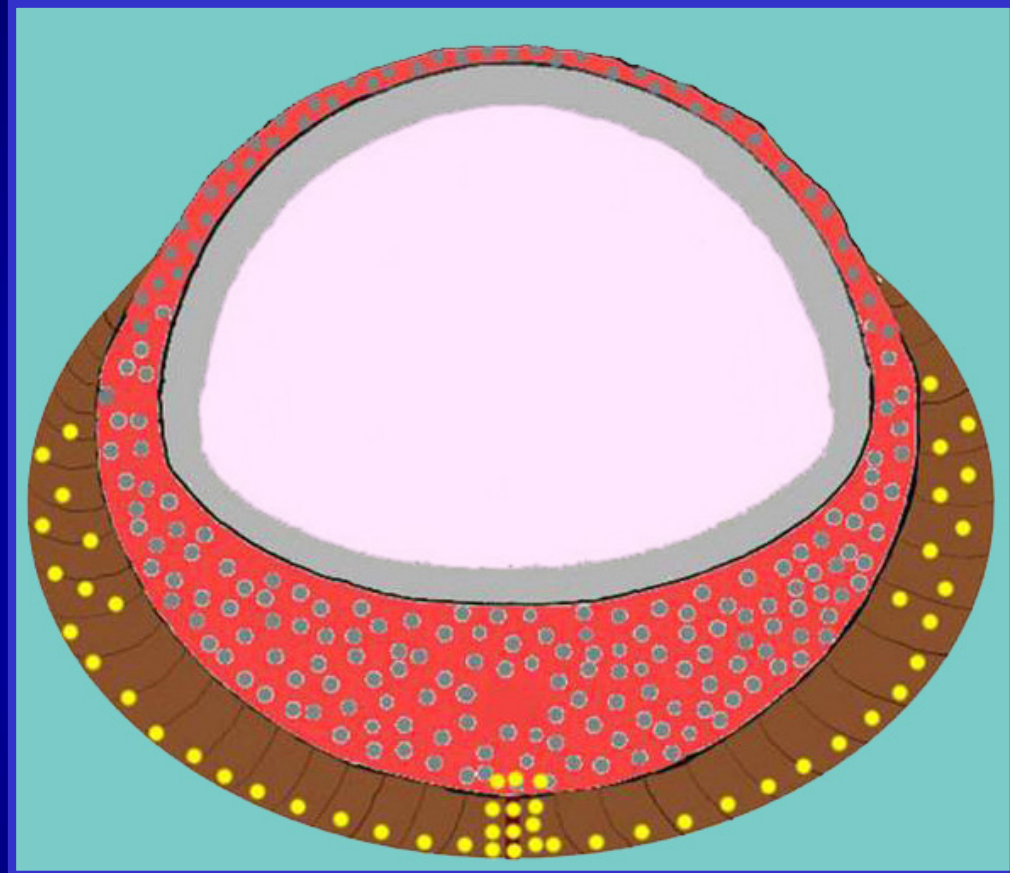
Yang and Bradley, BJU International 2000; 85:857-863





Yucel and Baskin, BJU International 2003; 92: 624-630



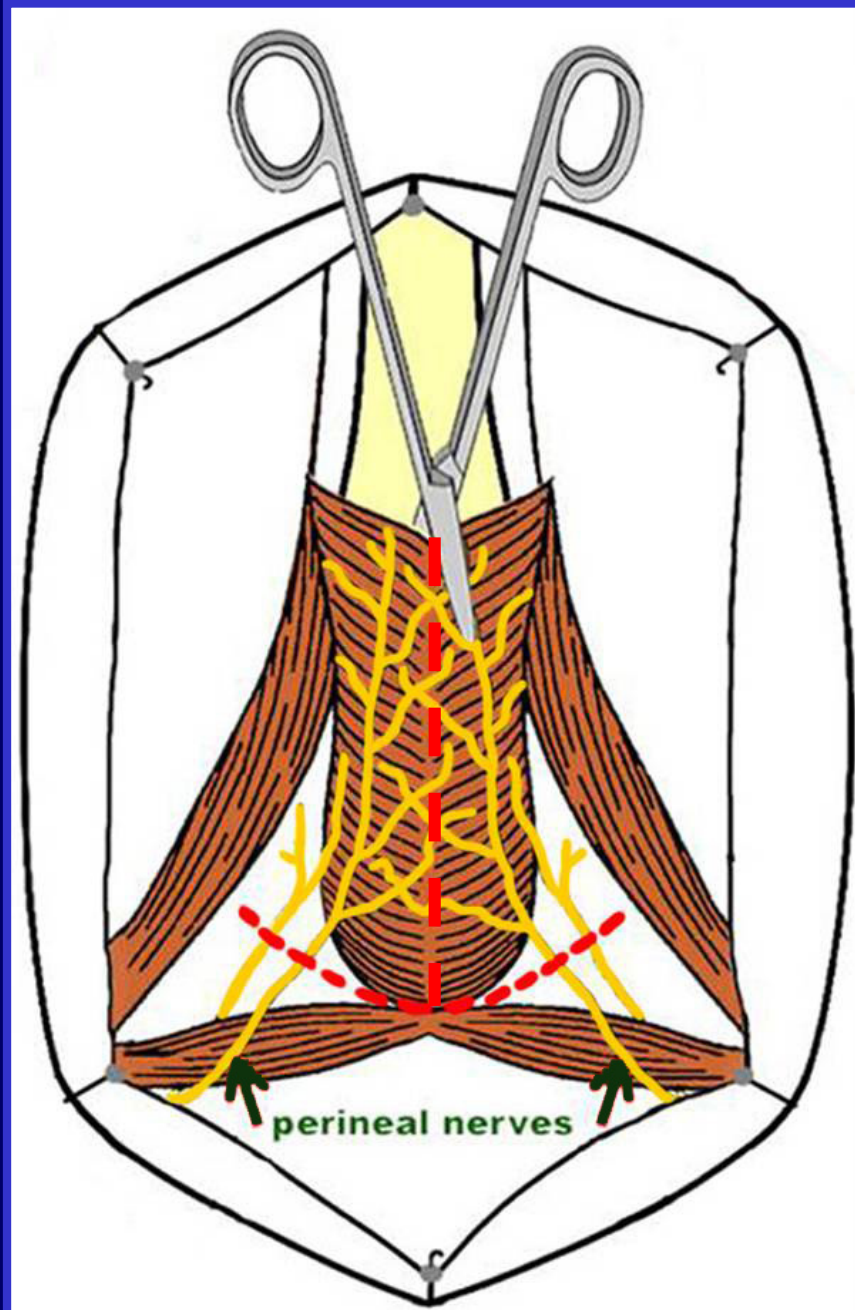


Yucel and Baskin, BJU International 2003; 92: 624-630



Center for Reconstructive Urethral Surgery





**During bulbar urethroplasty,
damage to the bulbo-
spongiosum 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**

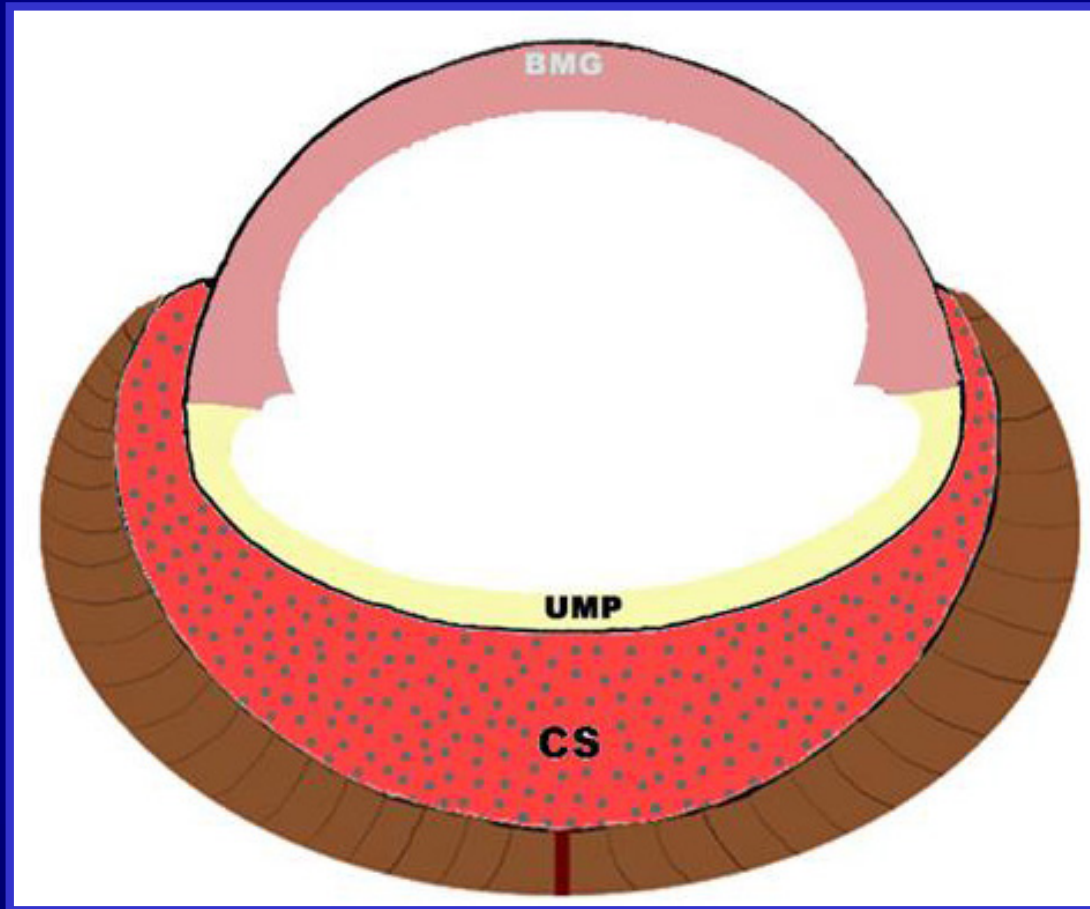


Loss of efficient contraction of the bulbo-spongiosum muscles and corpus spongiosum

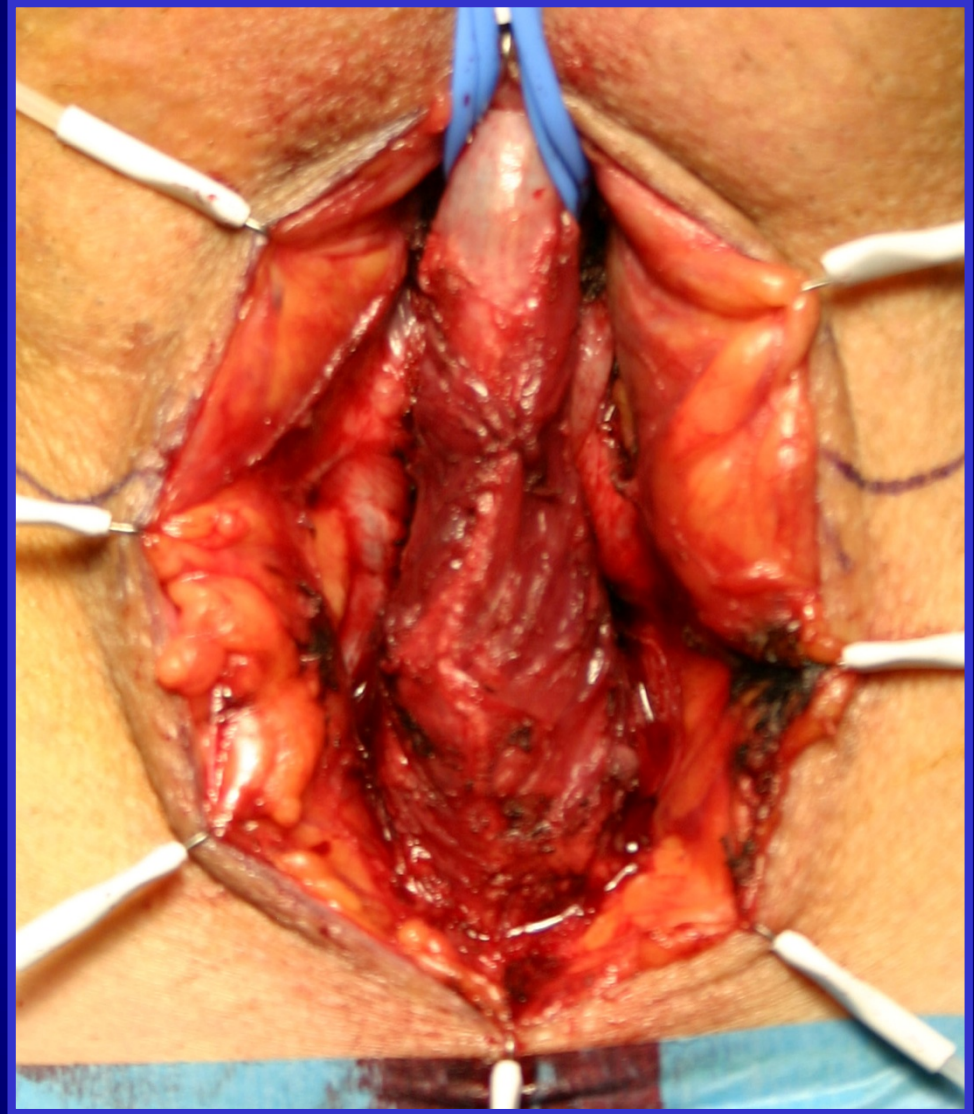
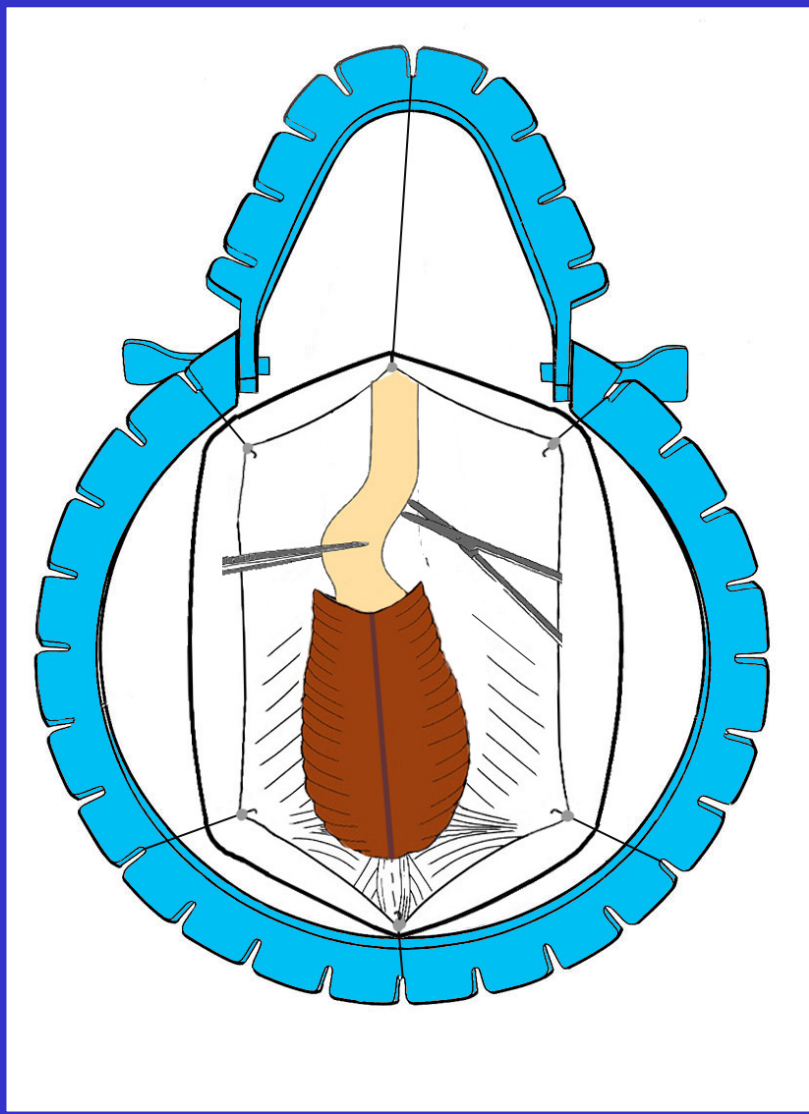
- decreased force of the ejaculation jet
 - loss of the ejaculation jet
 - semen sequestration
 - infertility
-
- urine sequestration in the urethral bulb
 - post-voiding dribbling

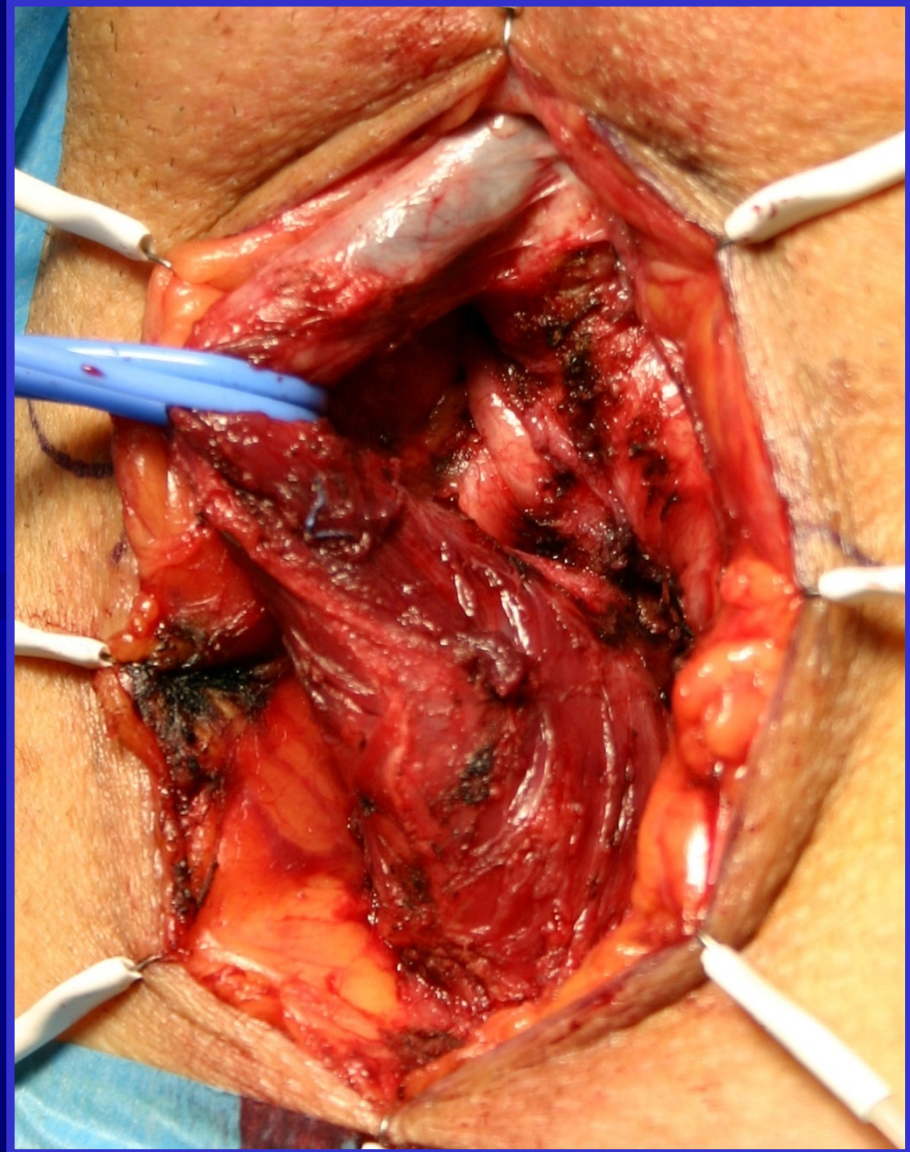
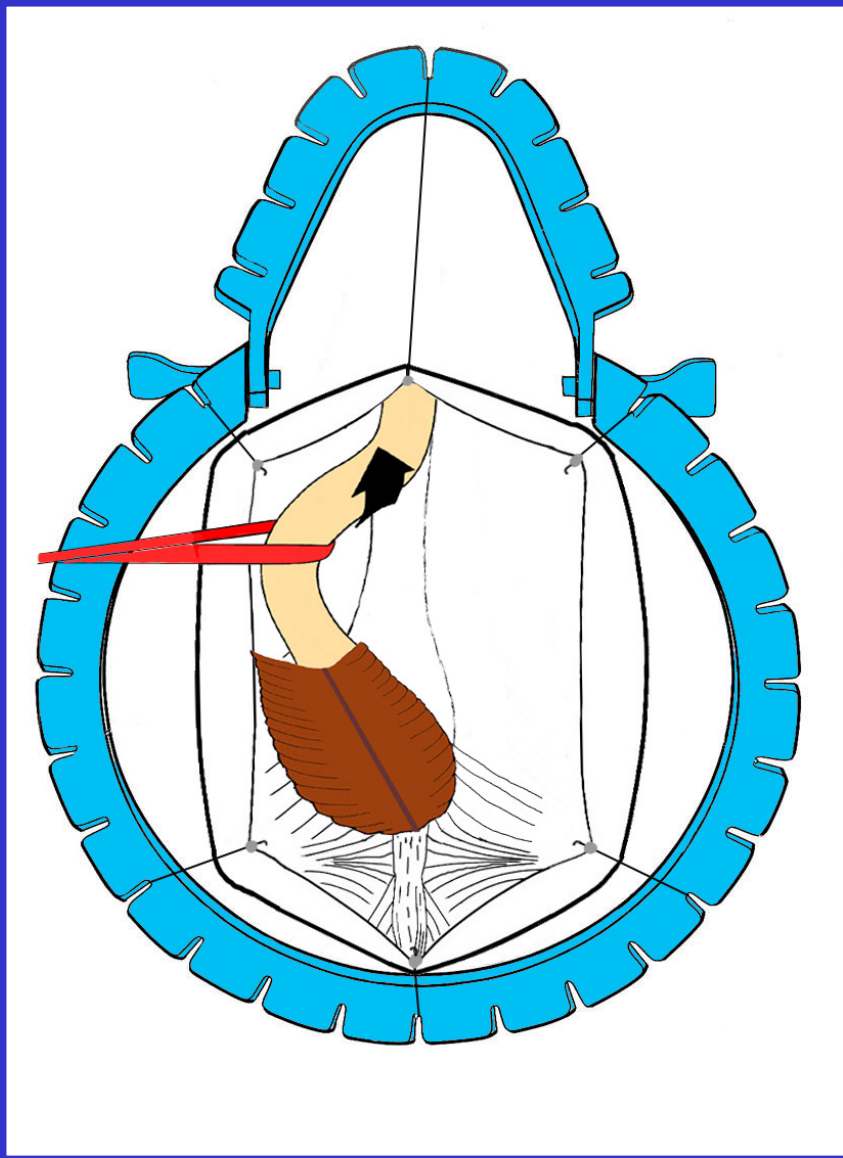


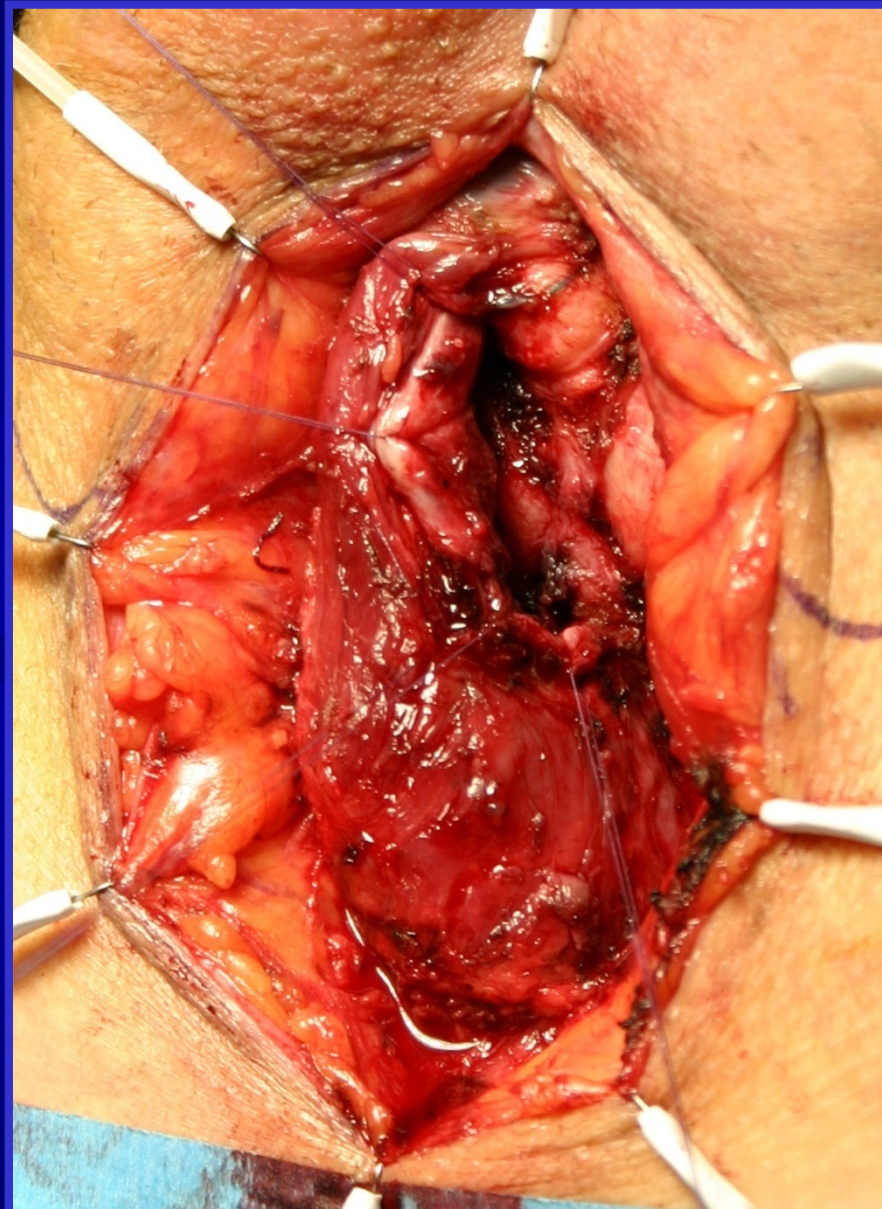
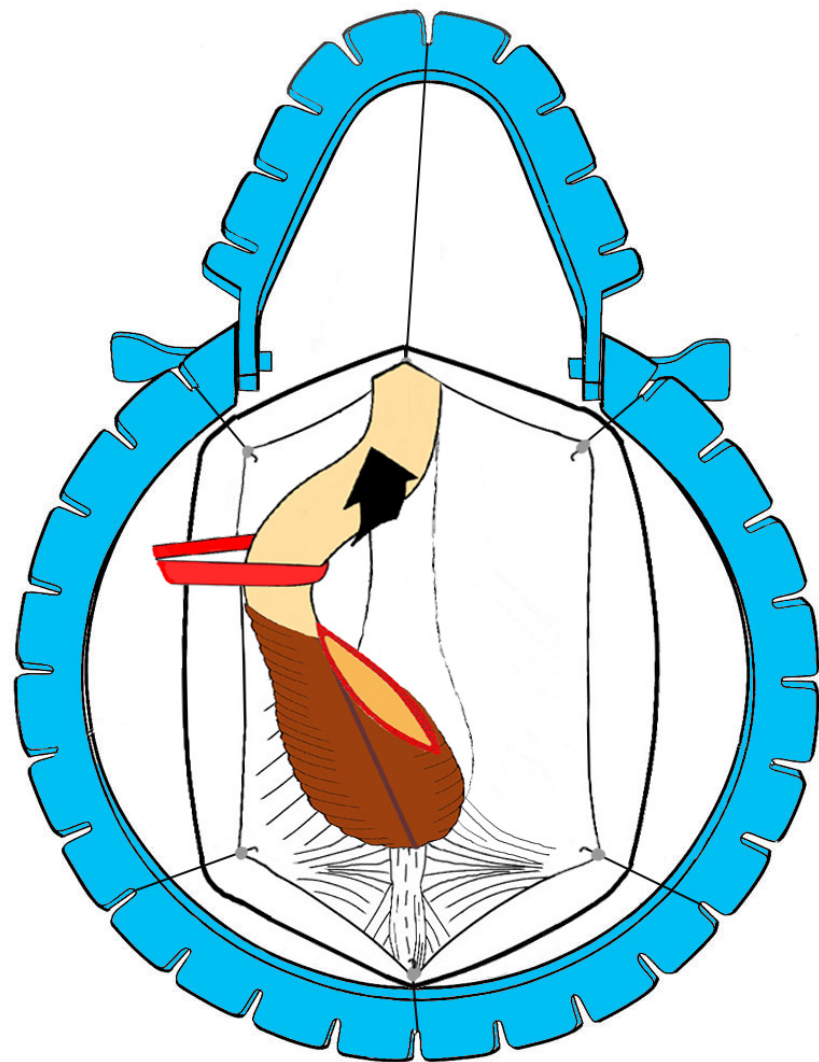
A new muscle and nerve sparing dorsal onlay graft bulbar urethroplasty

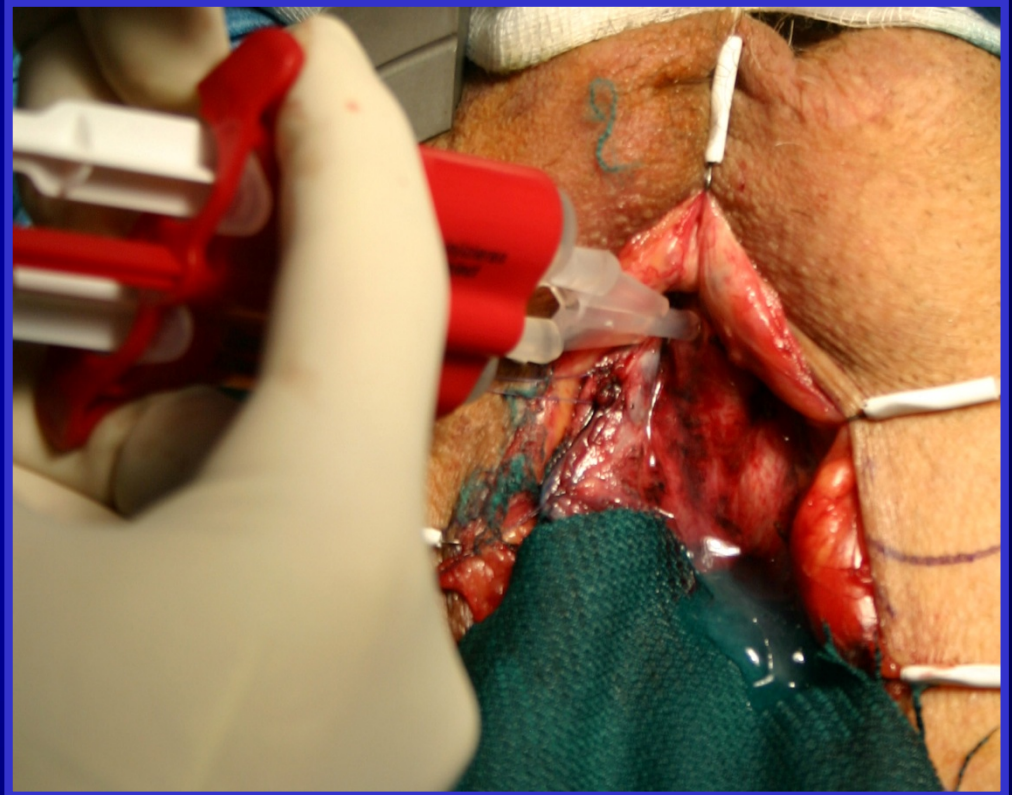
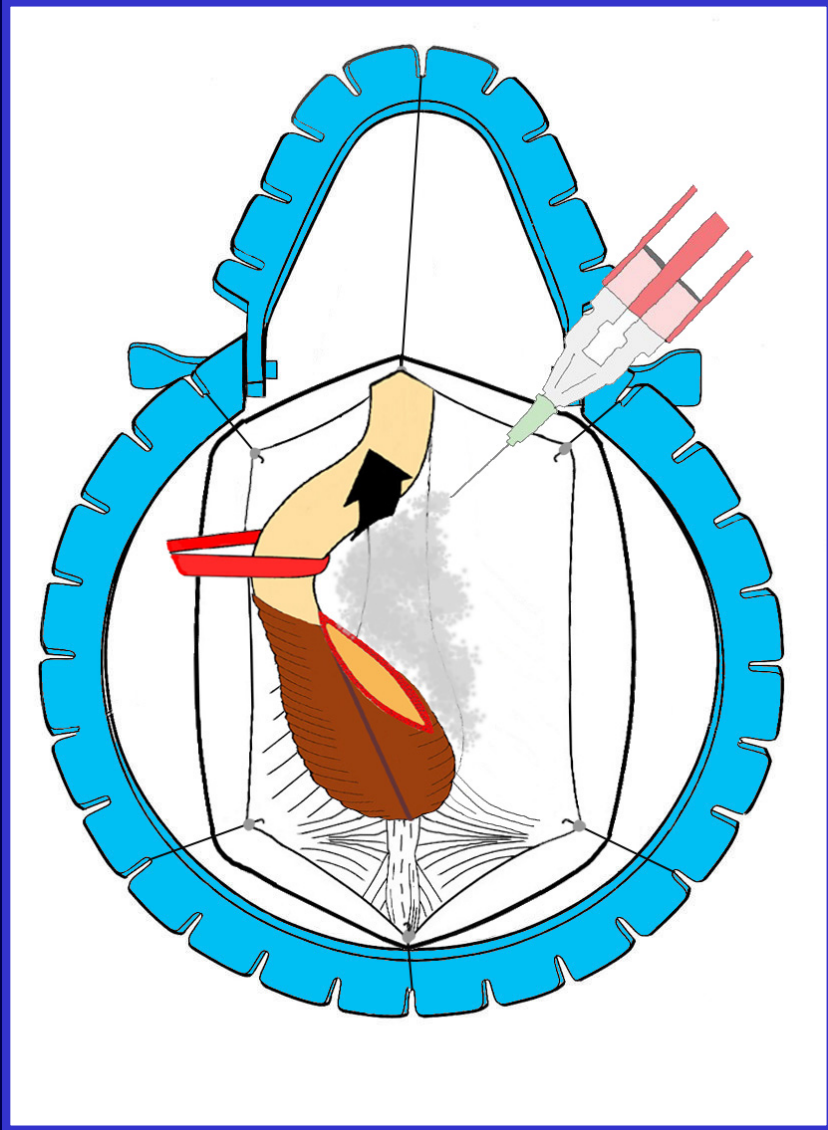


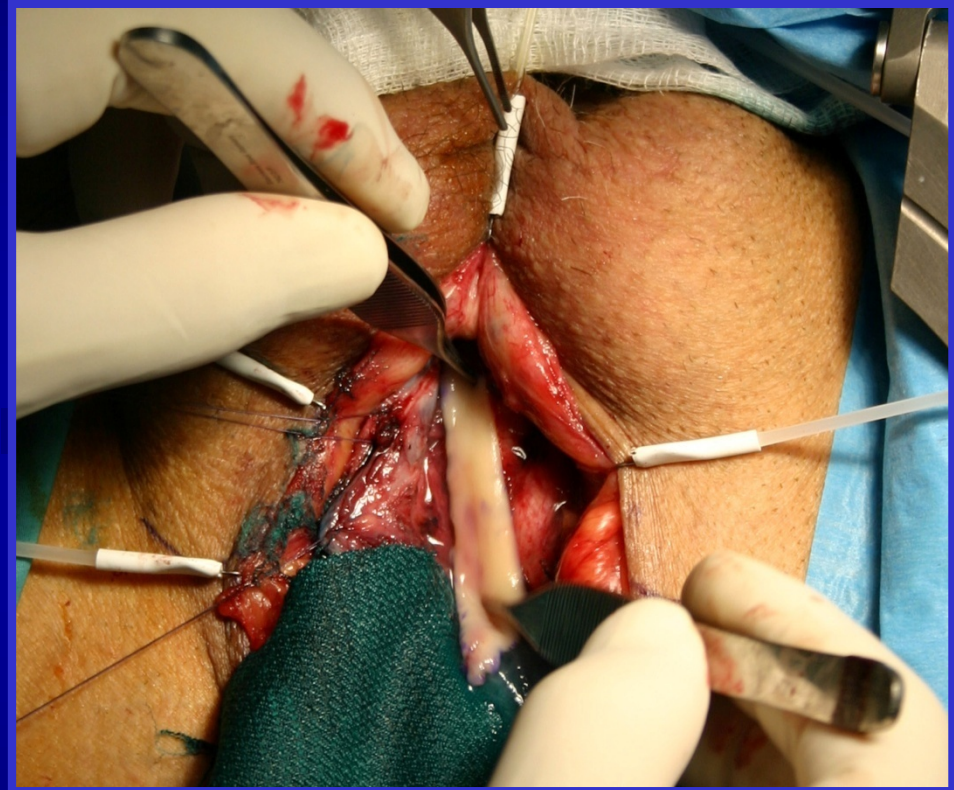
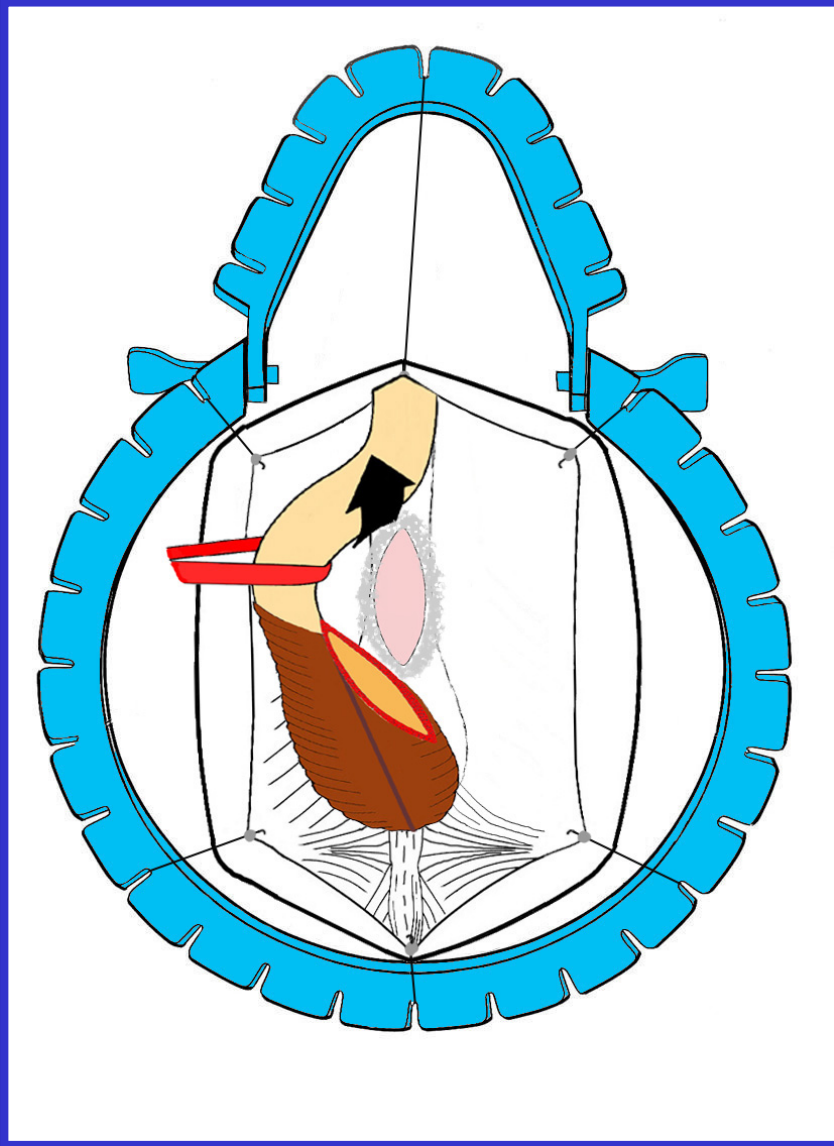


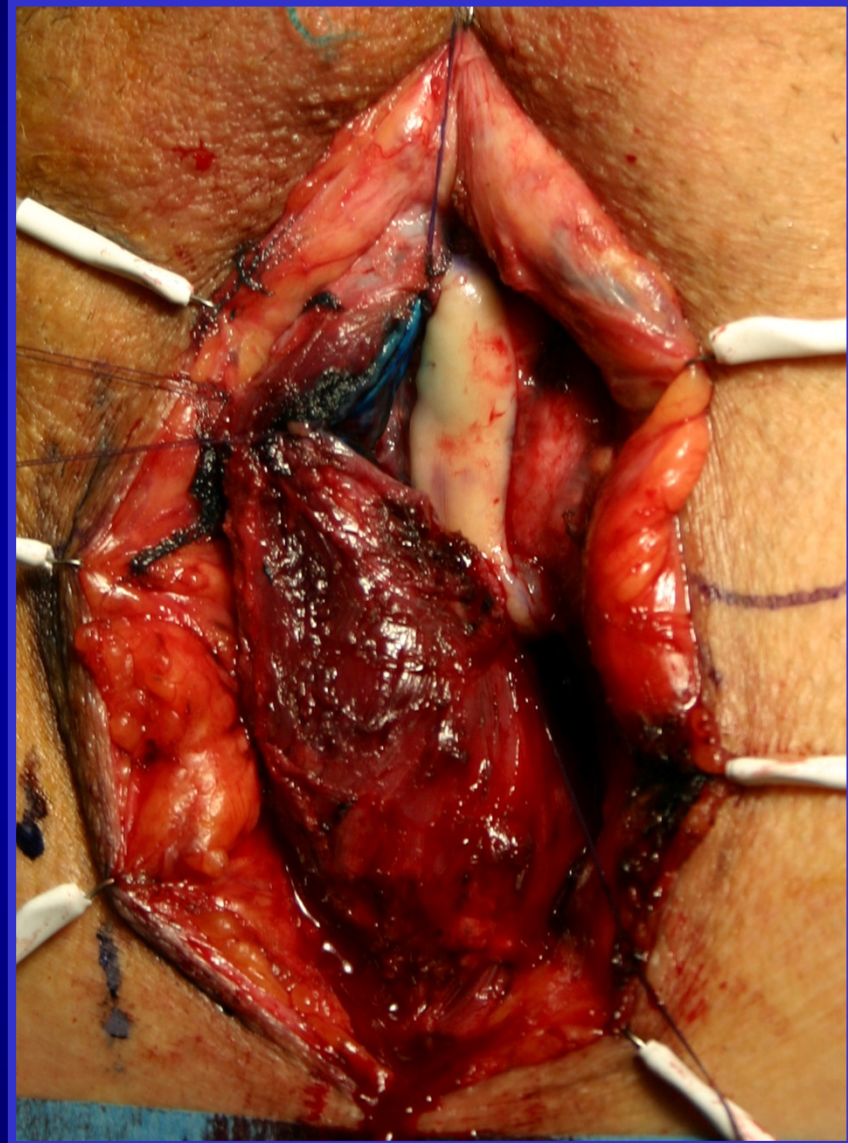
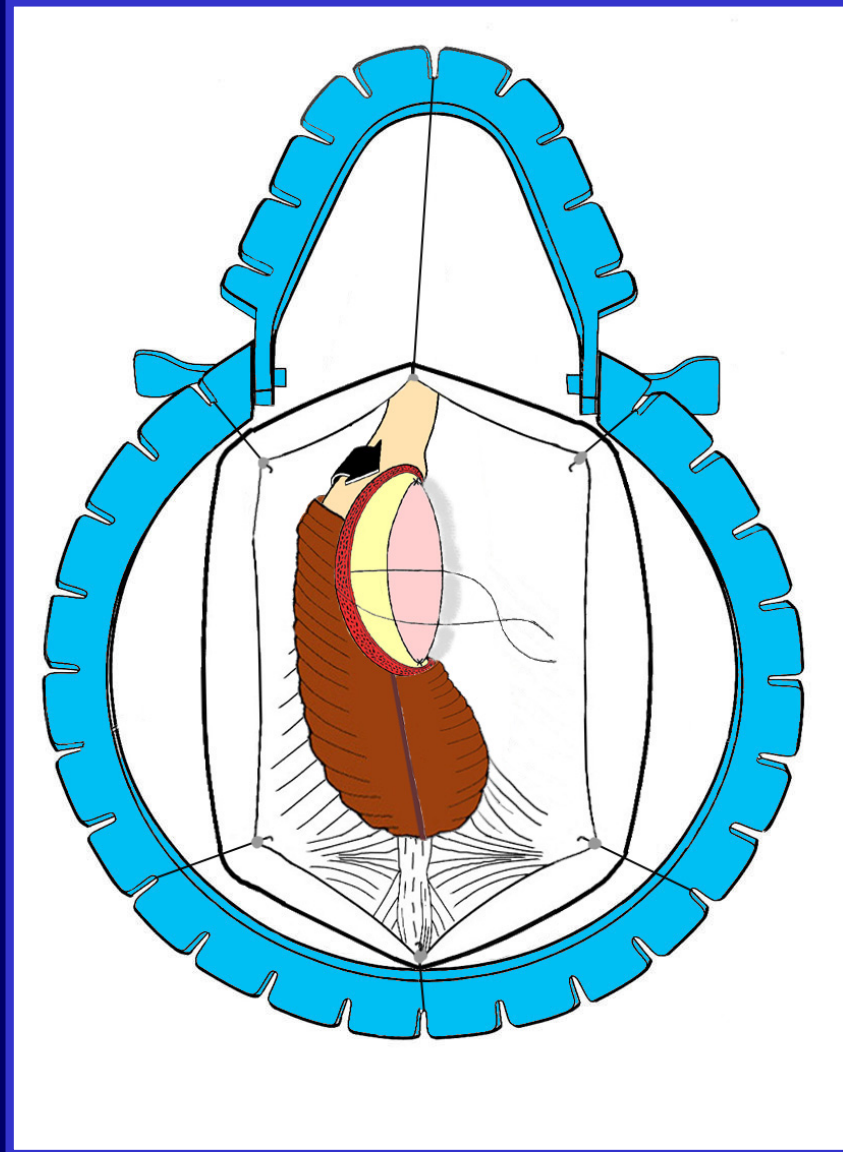


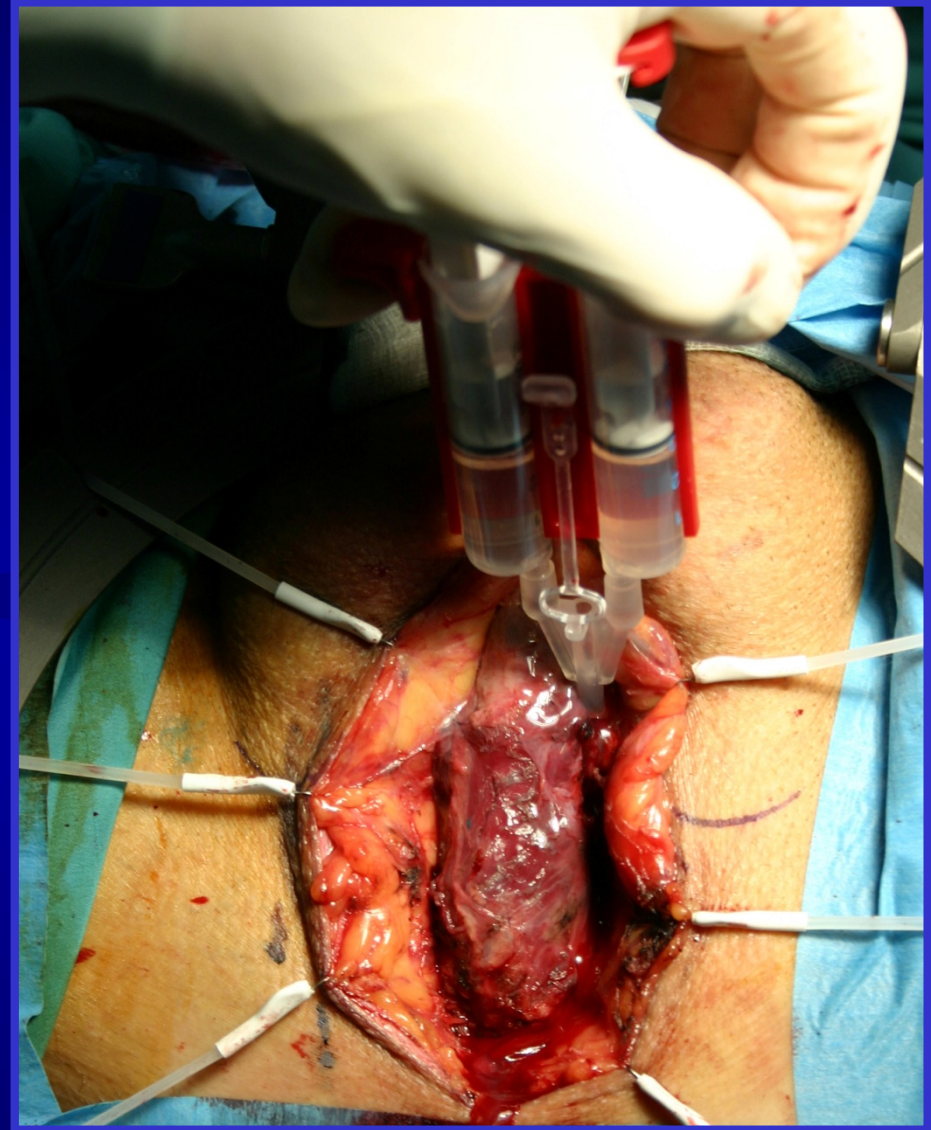
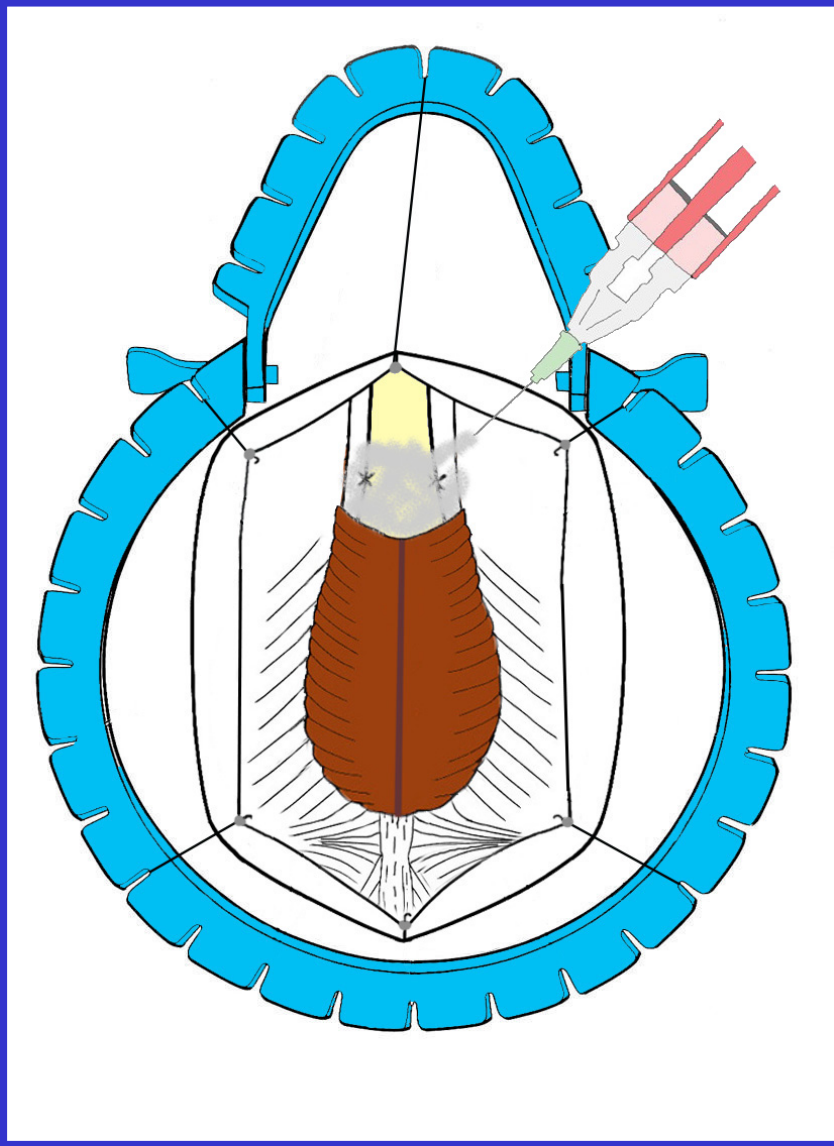




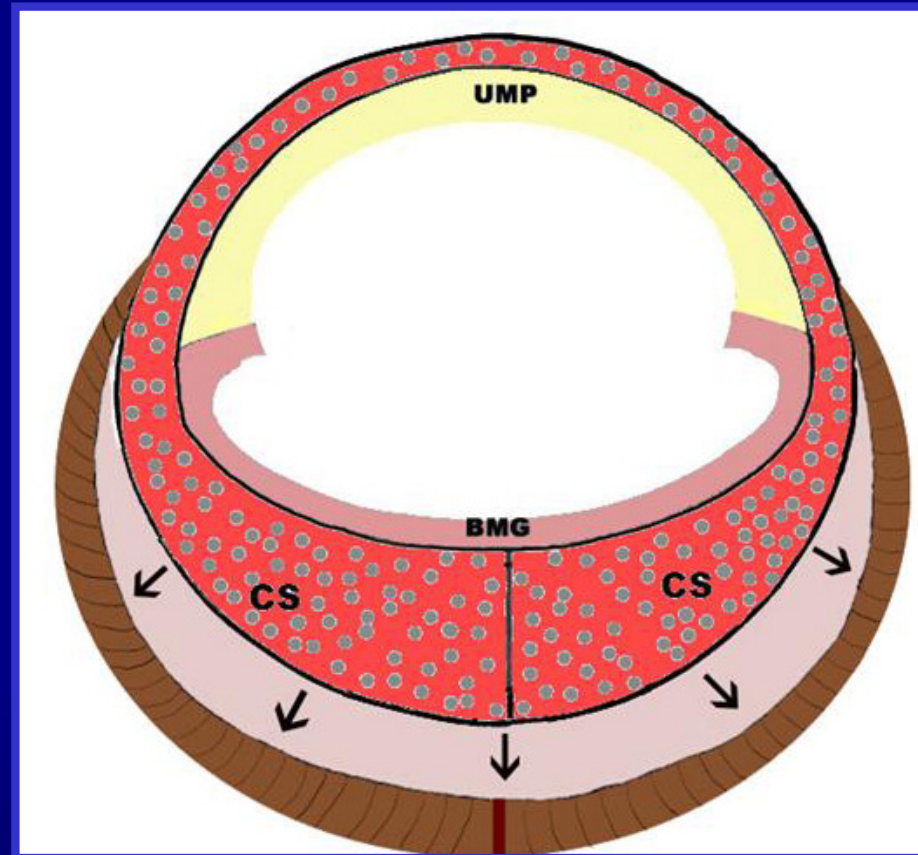




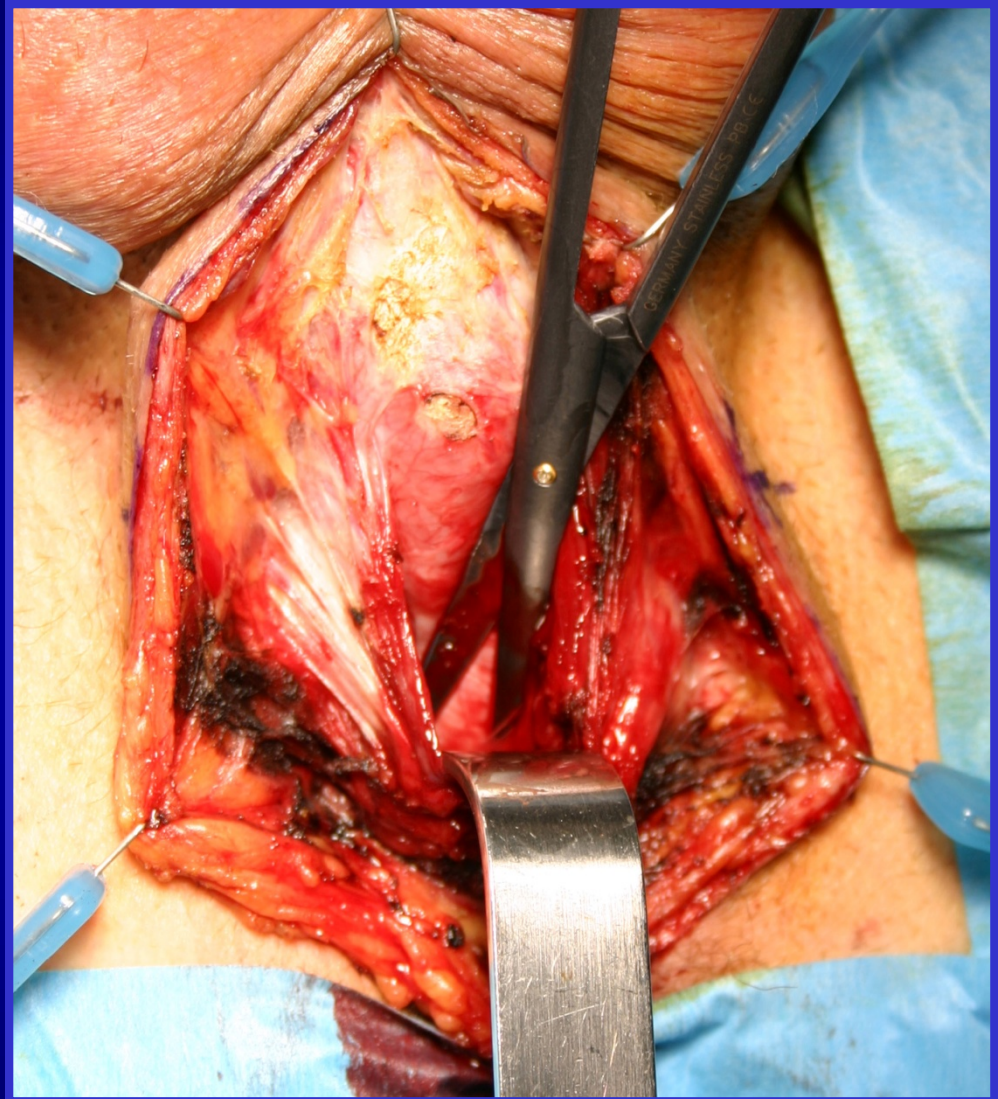
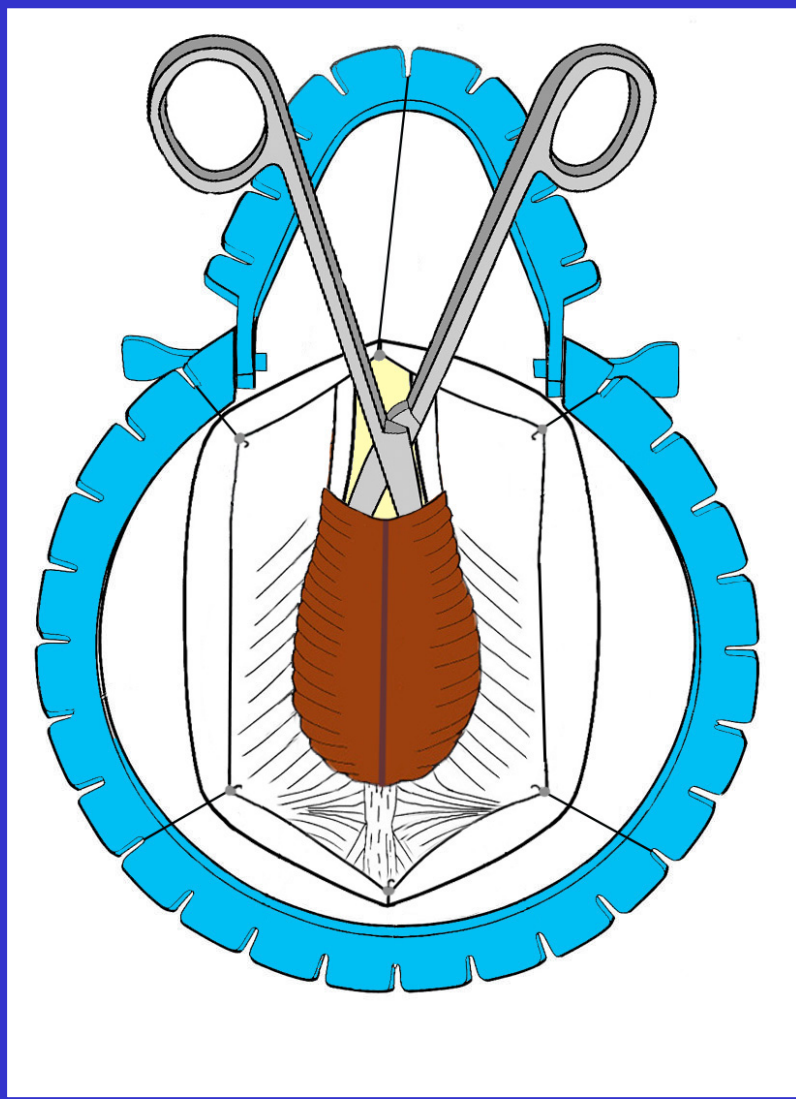


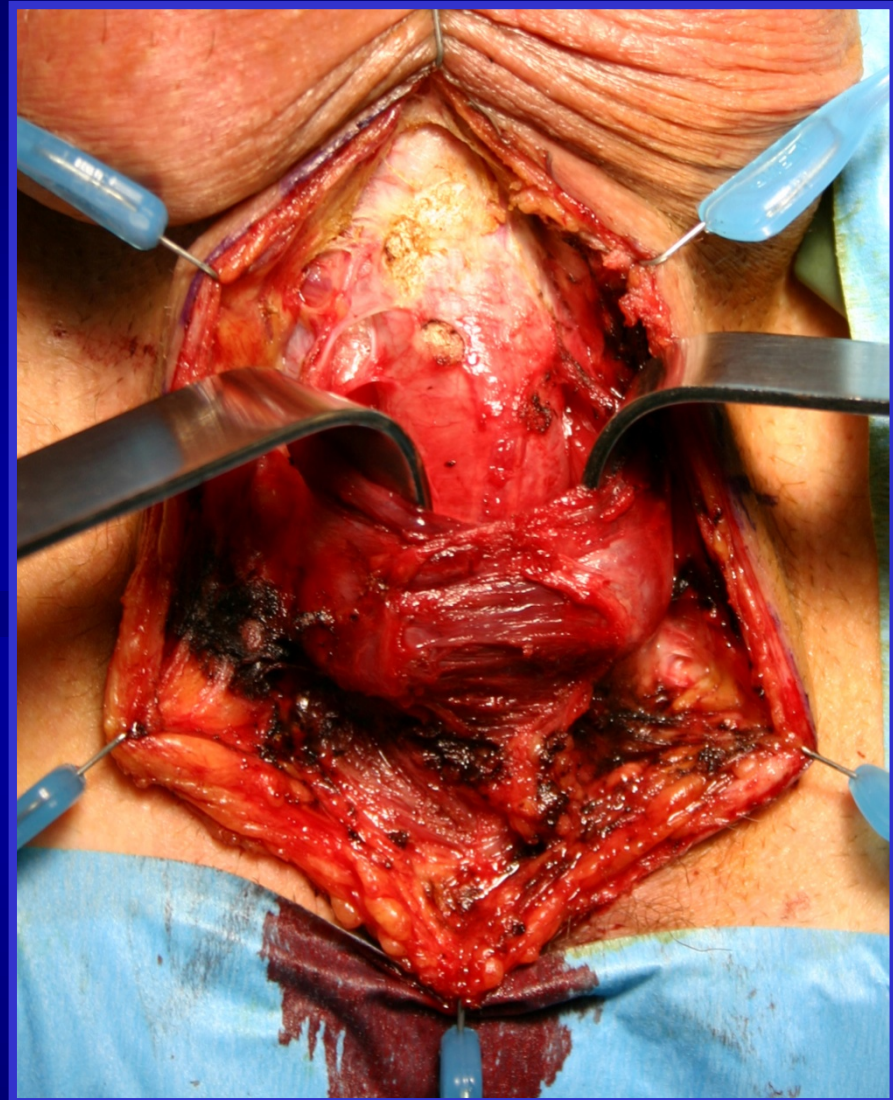
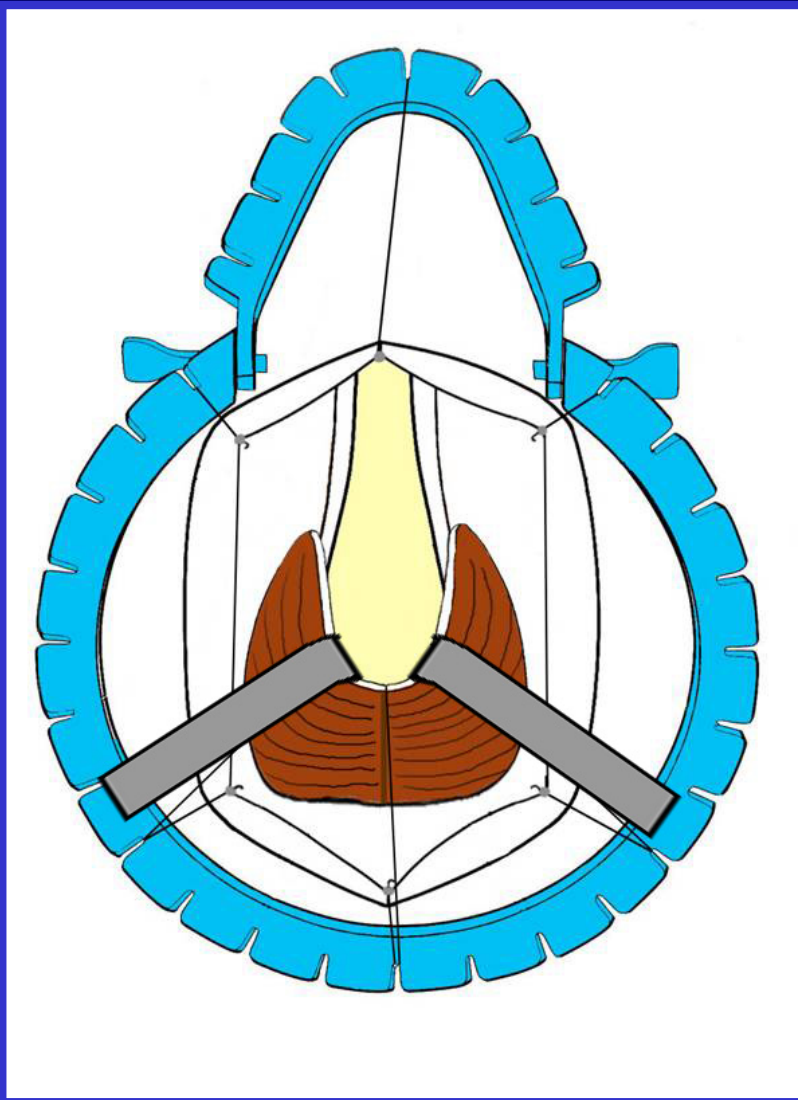


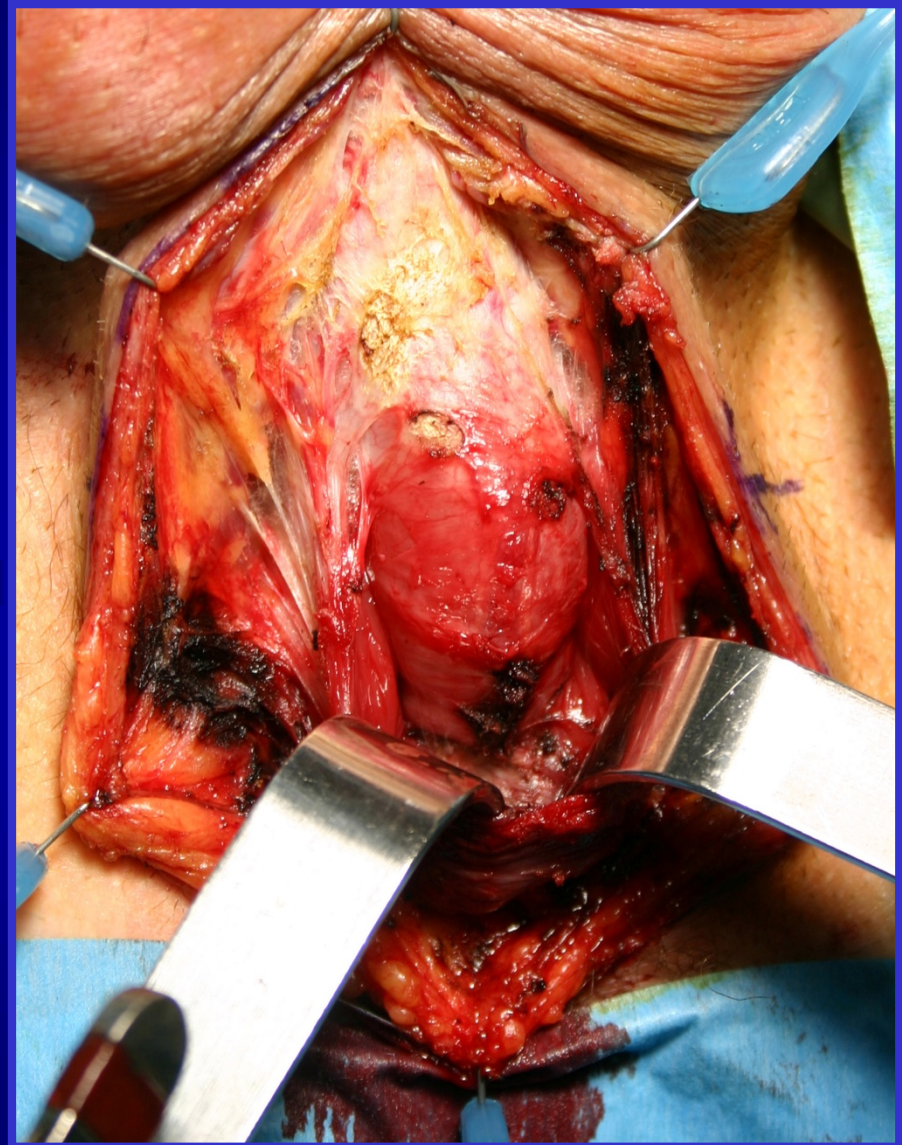
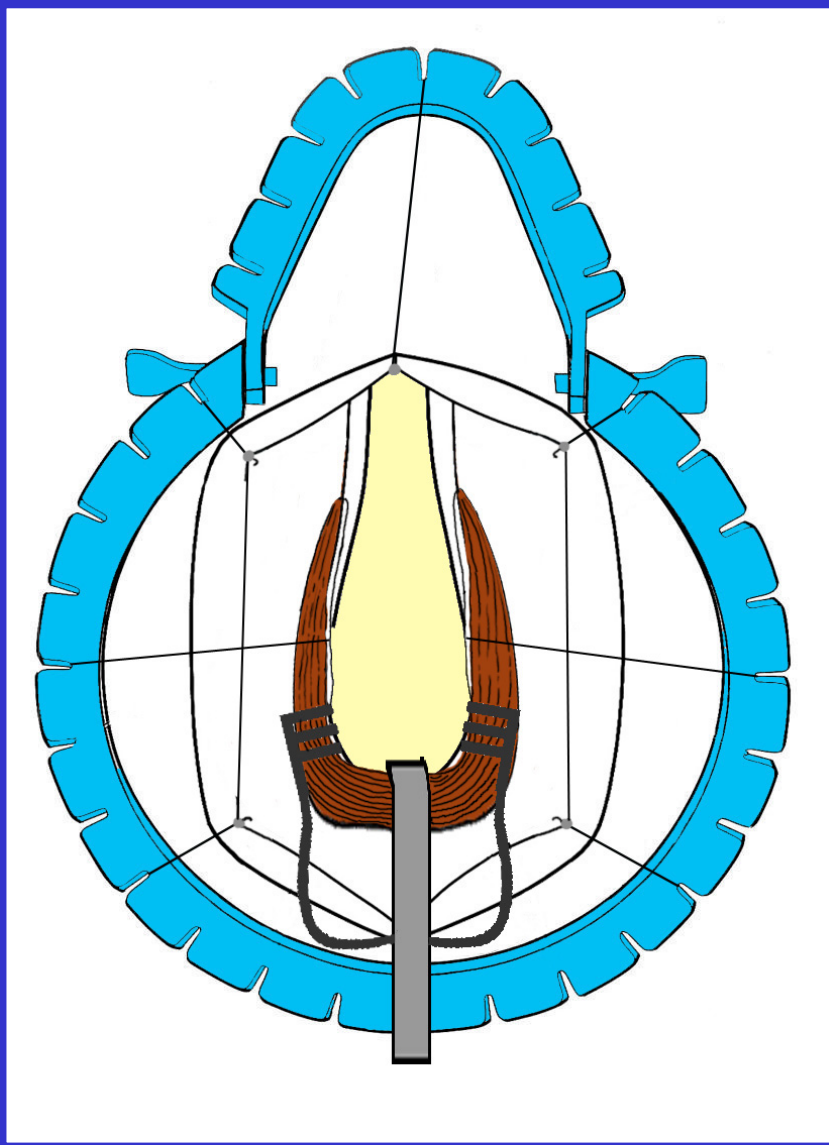
A new muscle and nerve sparing **ventral** onlay graft bulbar urethroplasty

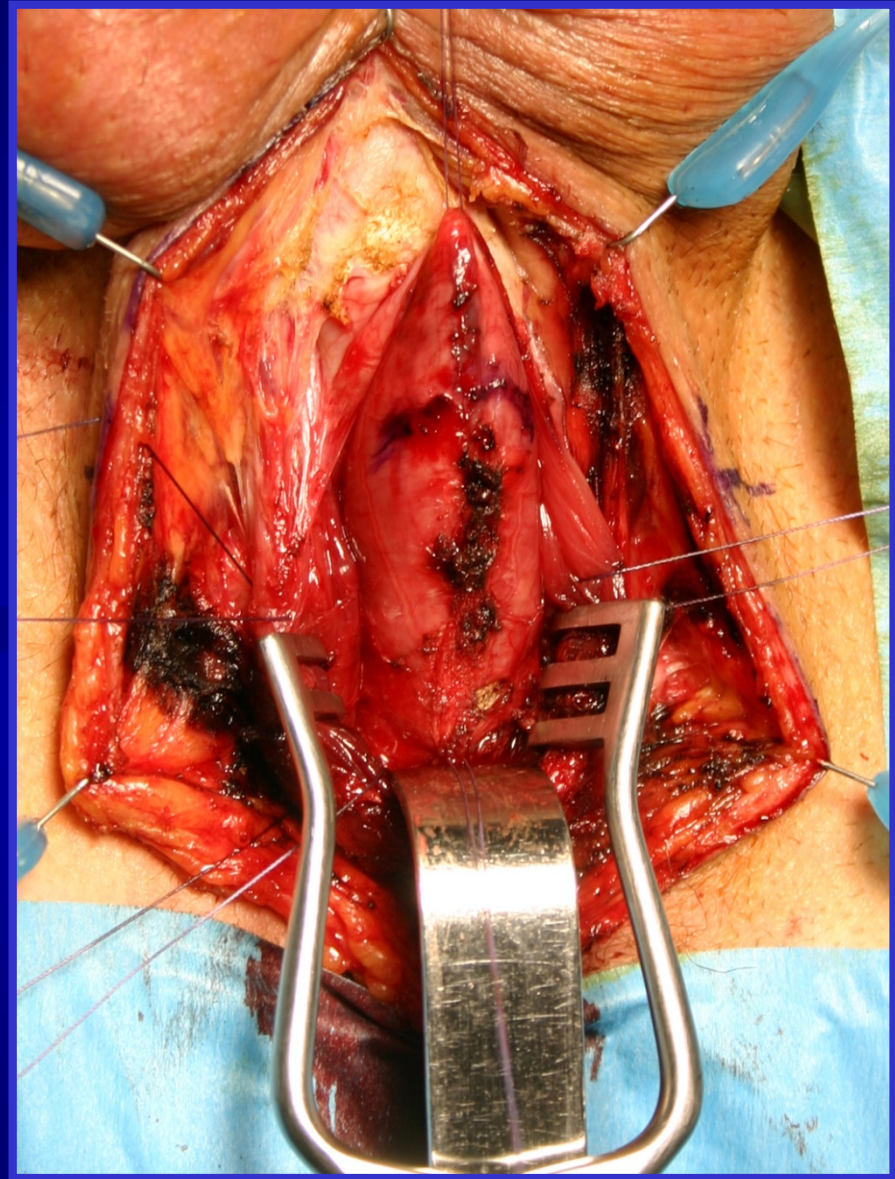
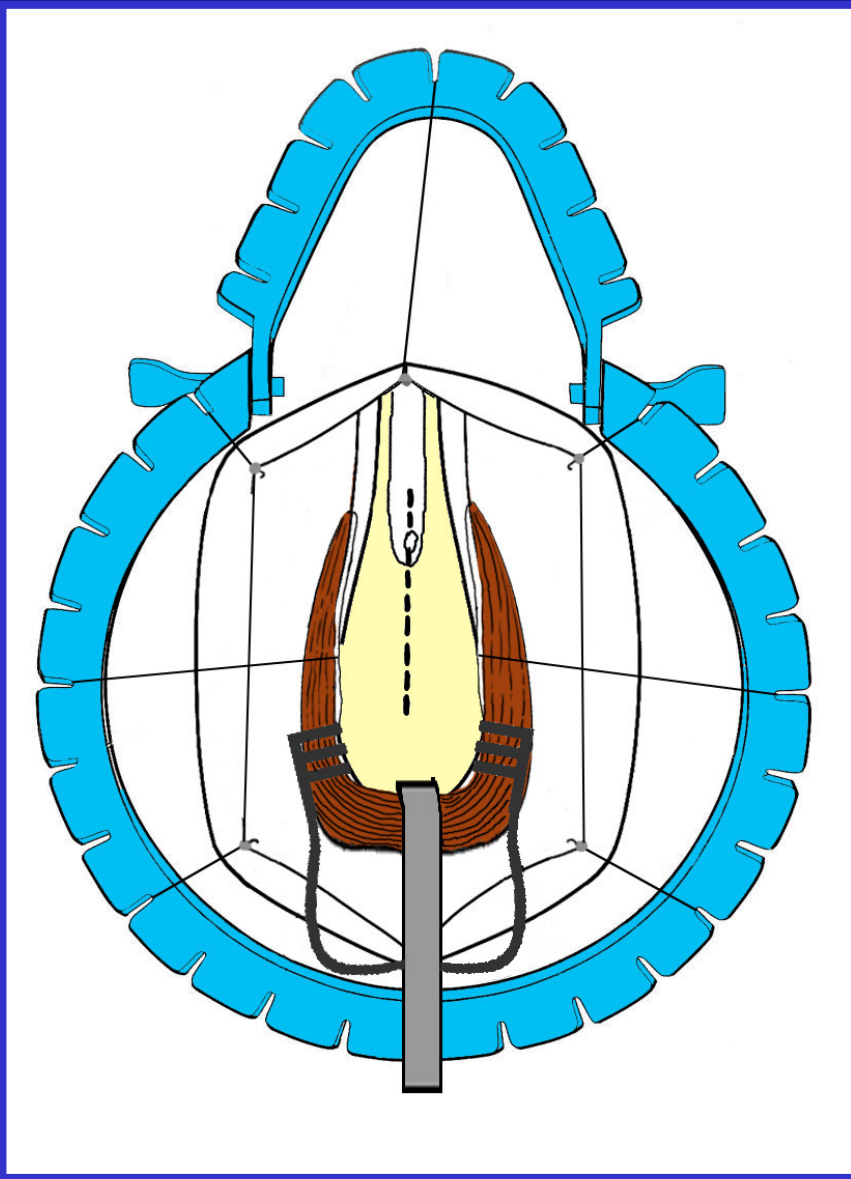


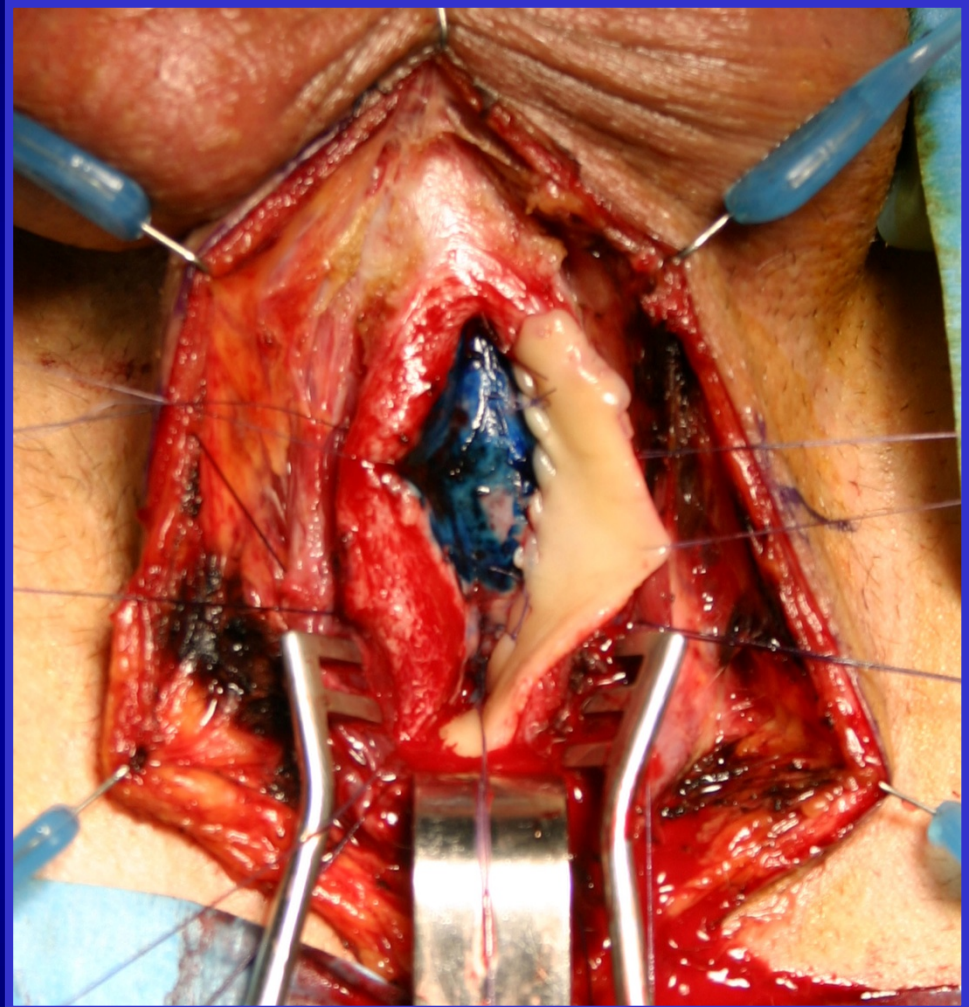
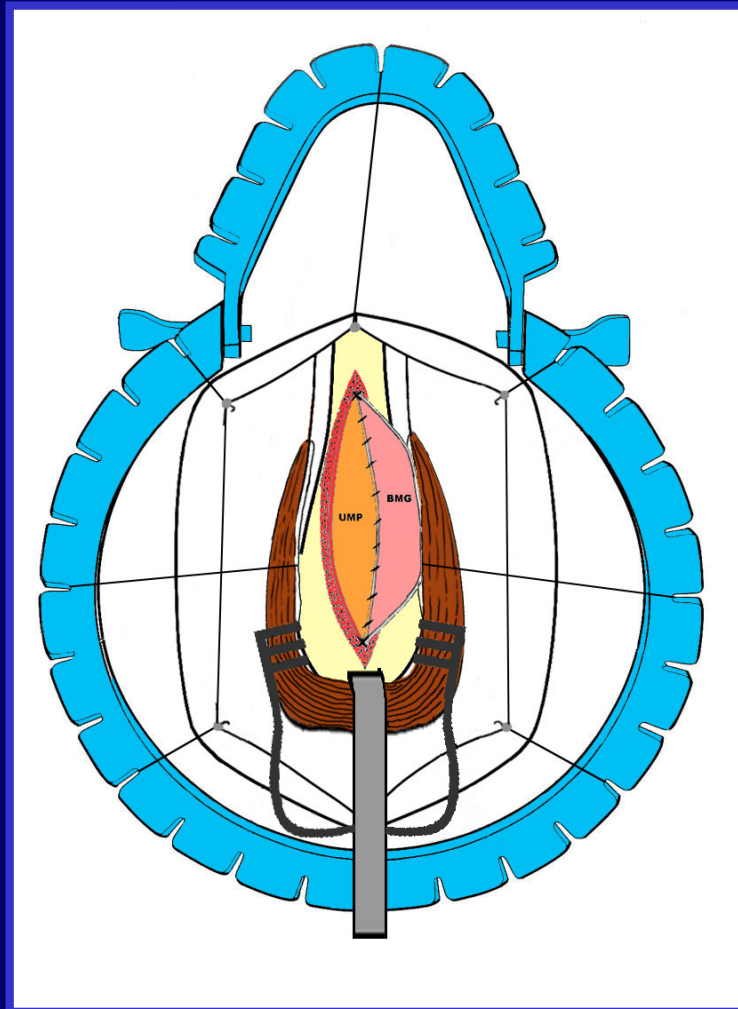


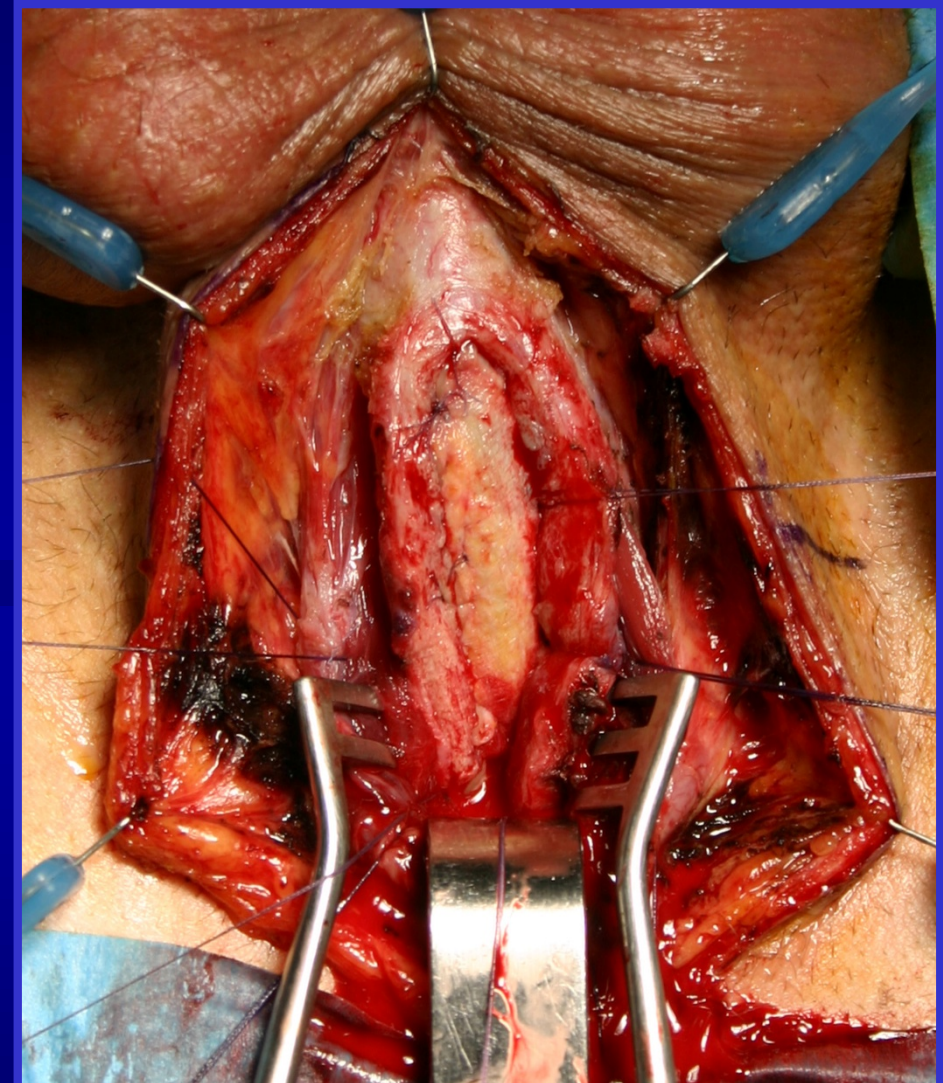
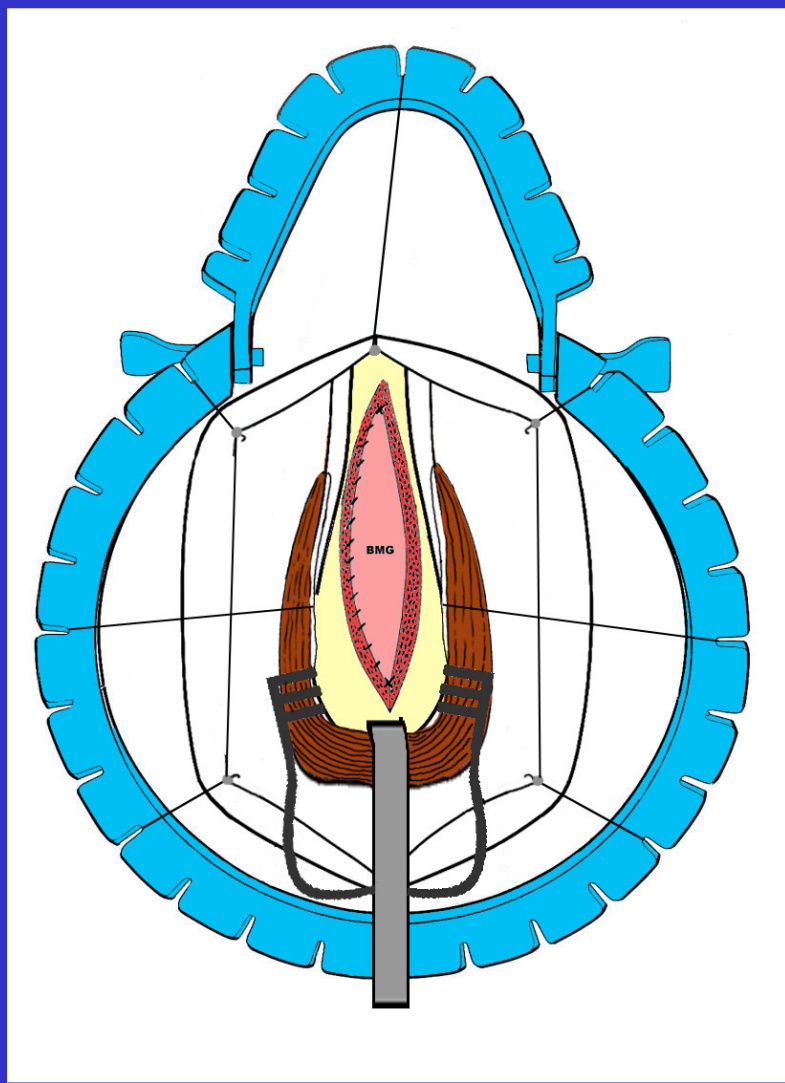


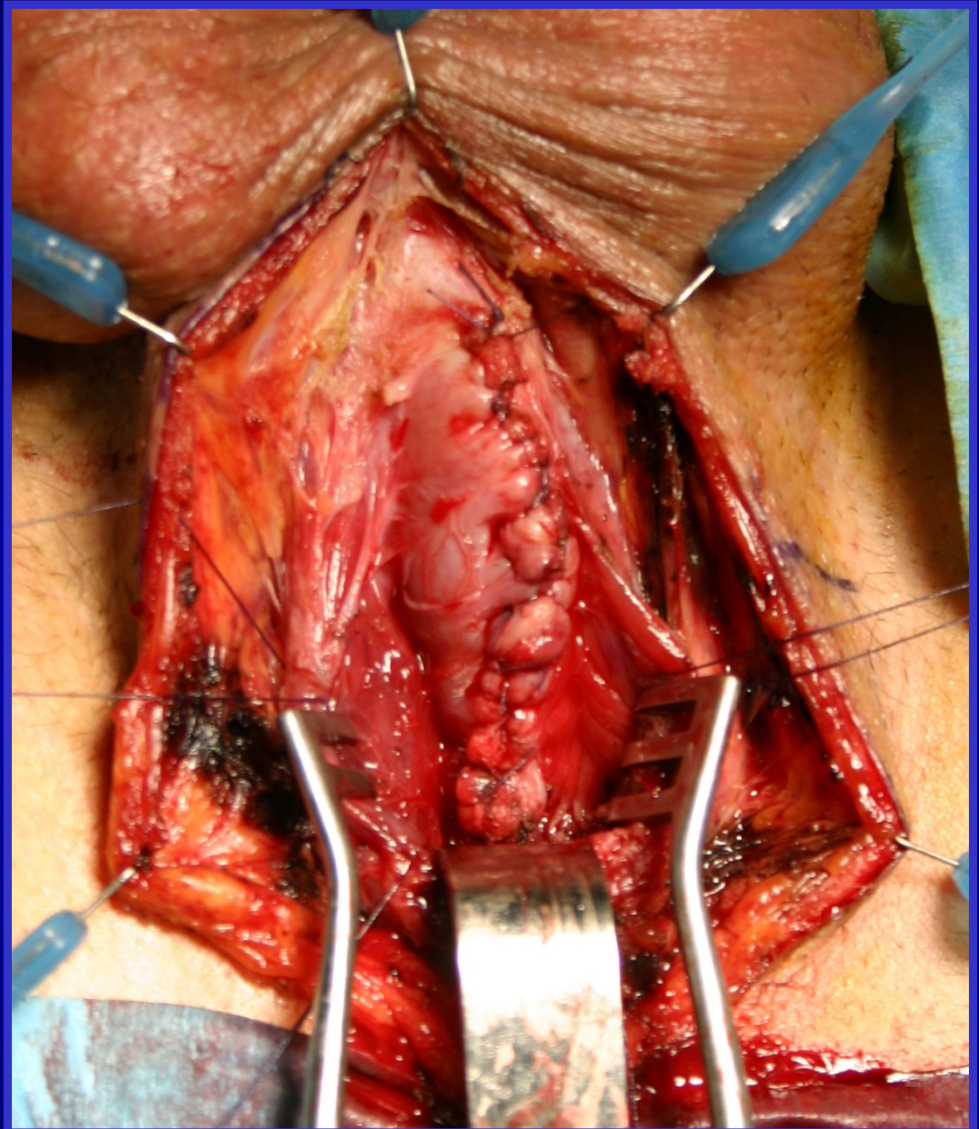
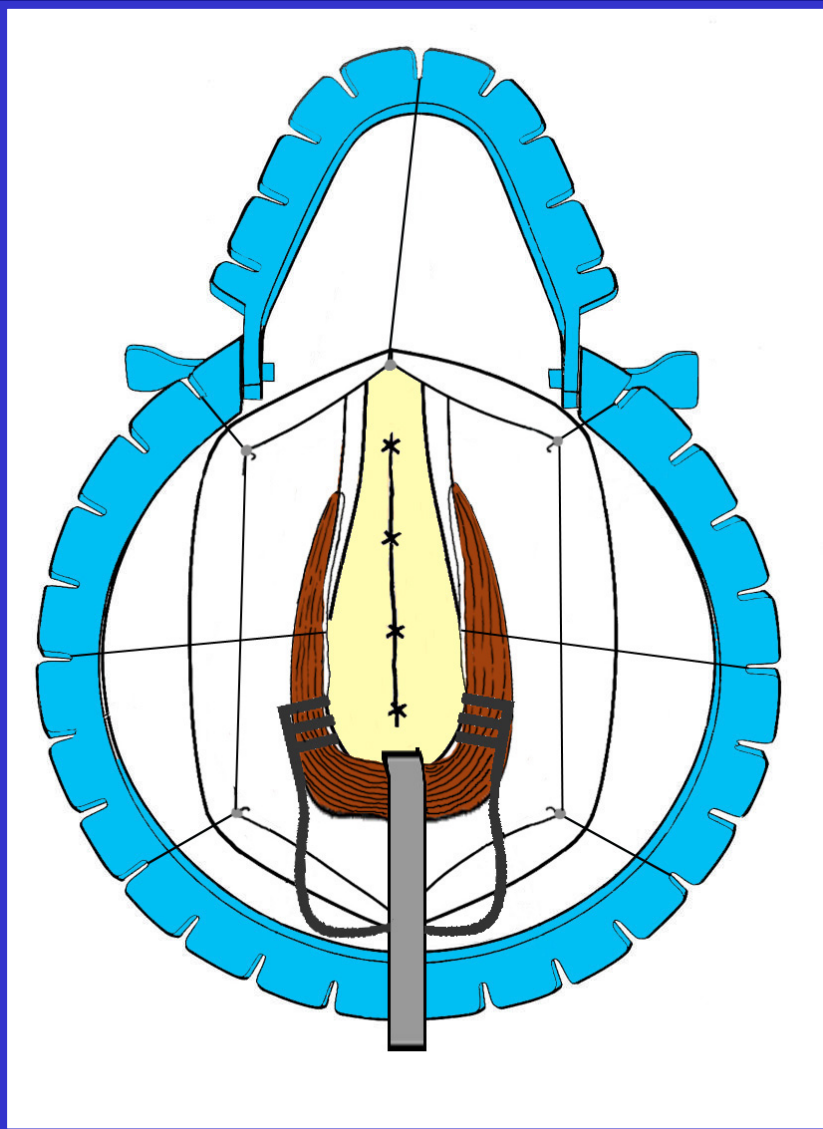


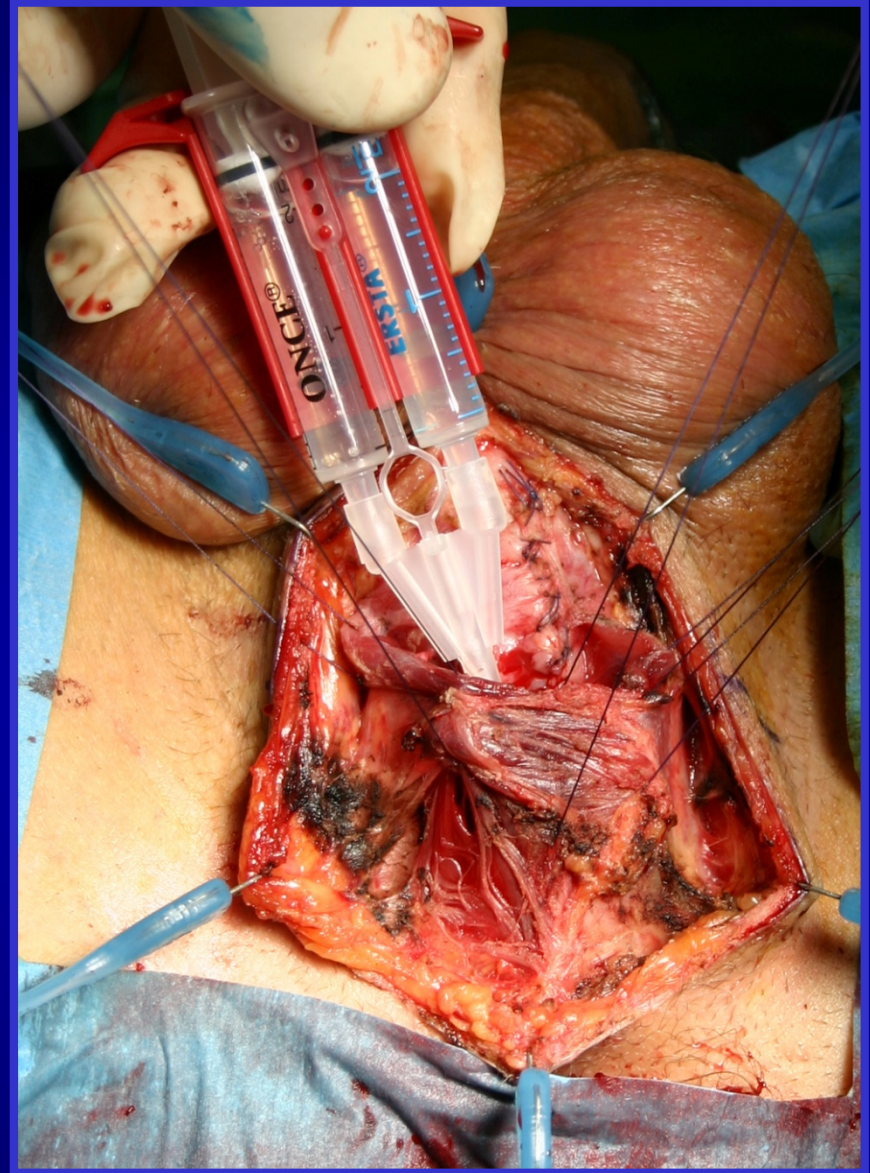
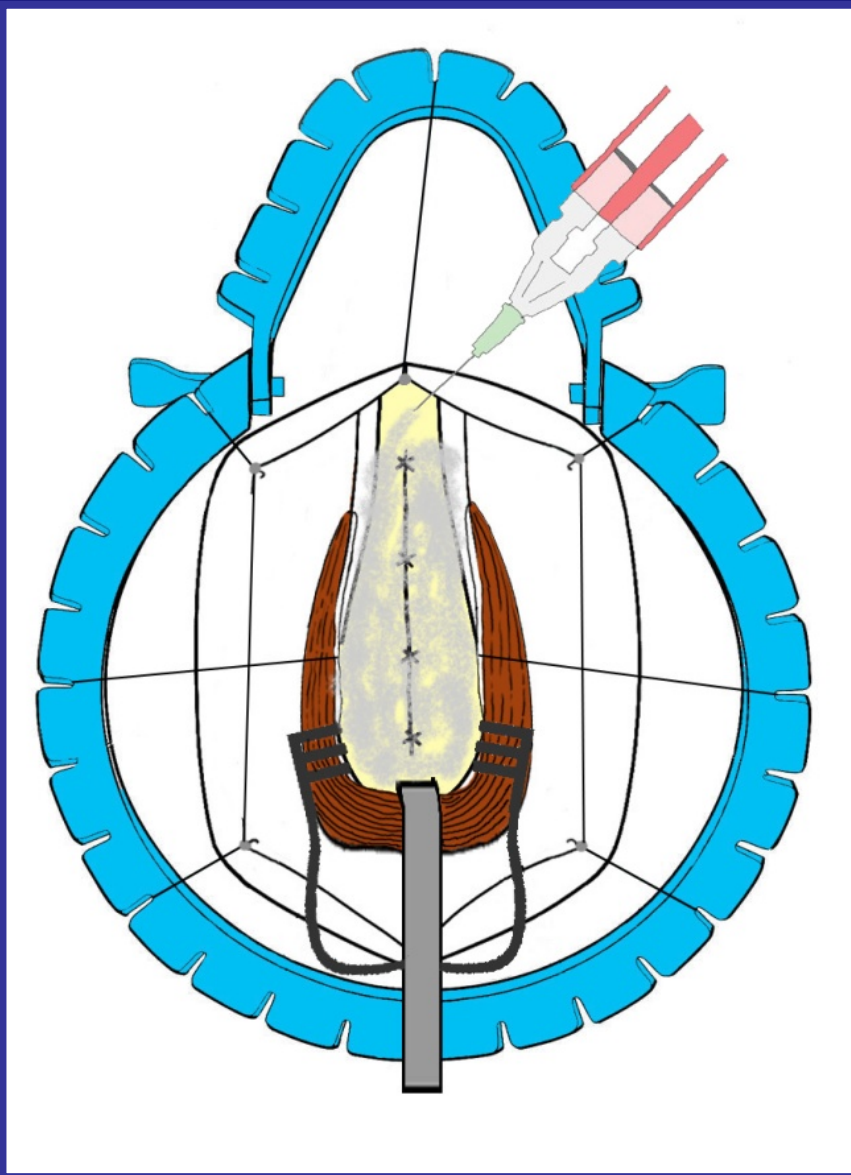


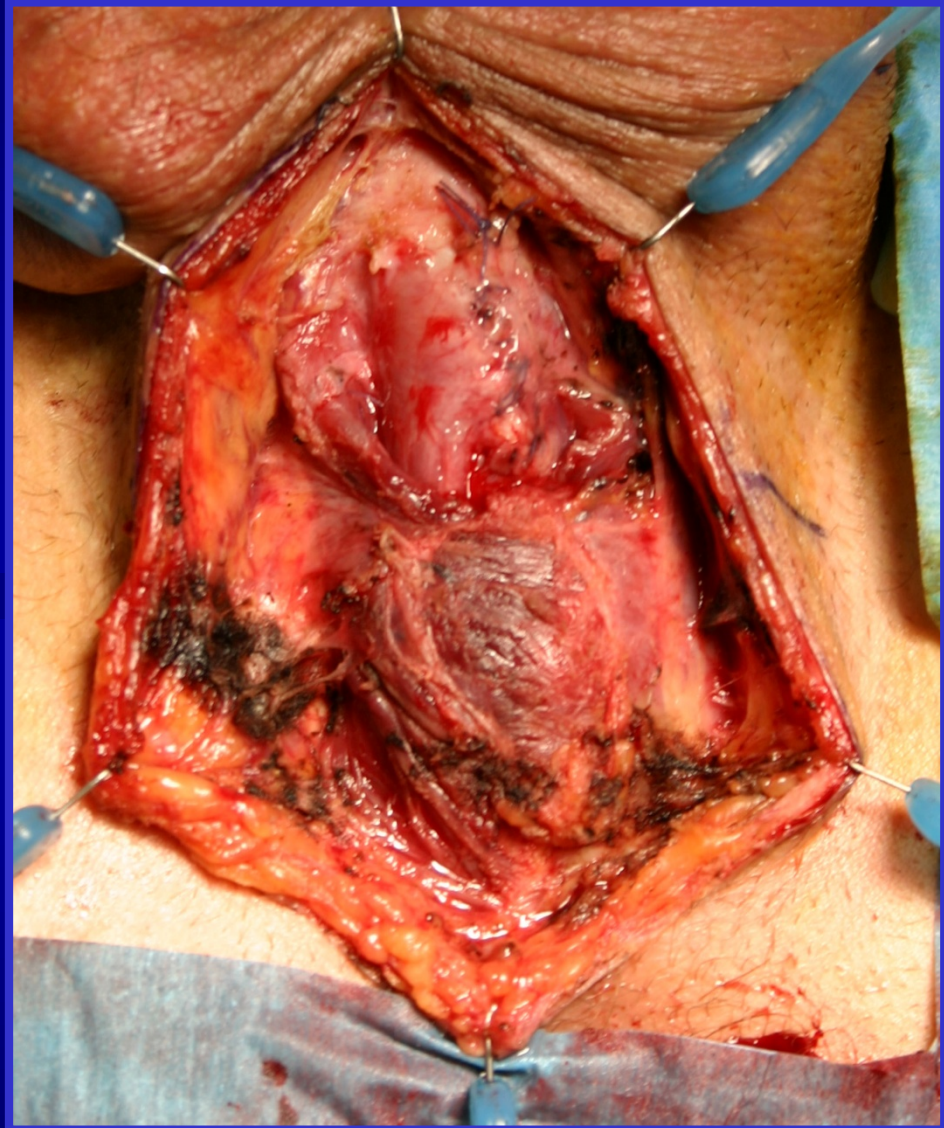
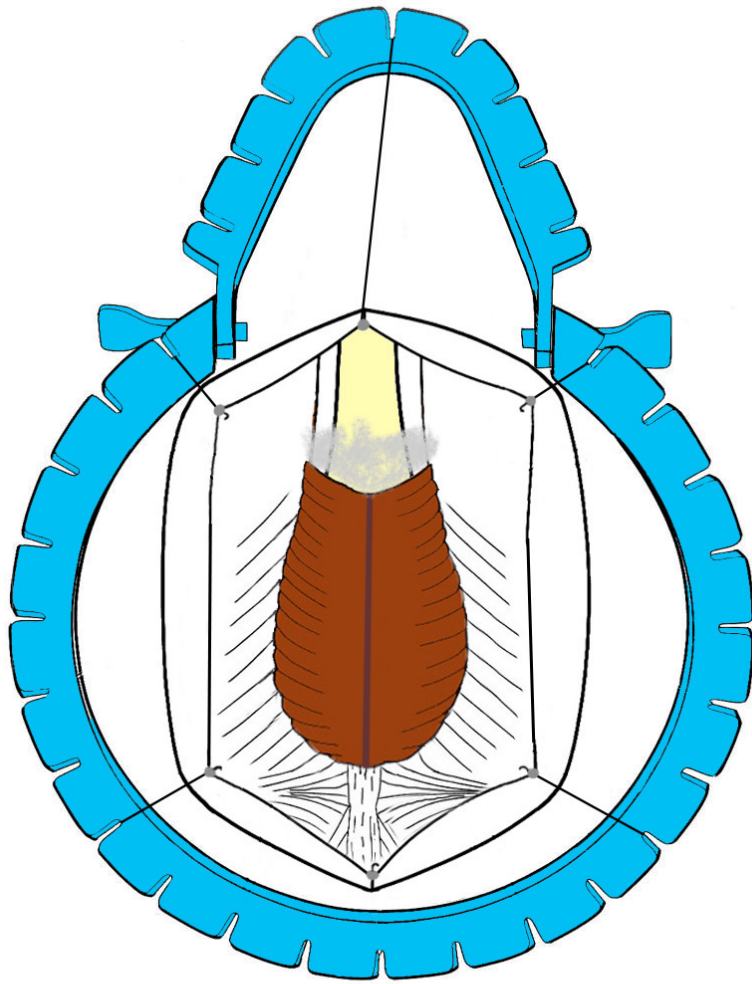












Conclusions

Preservation of the bulbo-spongiosum muscle and perineal nerve should represent a slight but significant step toward perfecting the surgical technique of bulbar urethroplasty, using a minimally invasive approach



Conclusions

Longer follow-up on a larger series of patients is necessary to confirm our preliminary satisfactory results, showing that preservation of muscle and nerve avoid the occurrence of post operative complications such as:

Post-voiding dribbling

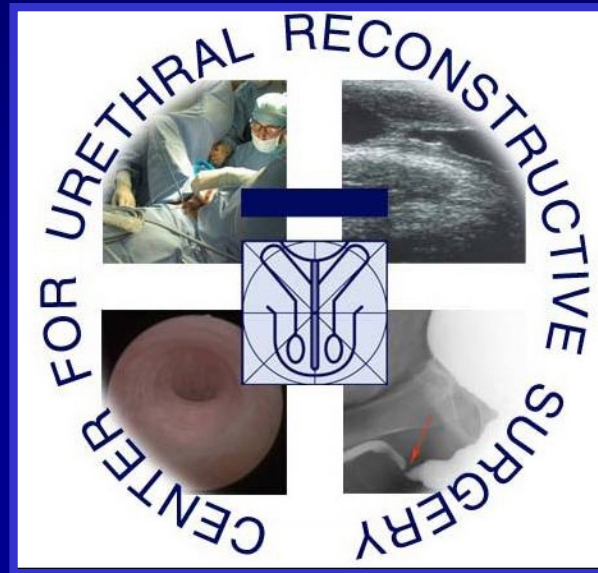
Loss of ejaculation

Partial urine and semen sequestration in the urethral bulb

We are currently working on gathering data



www.urethralcenter.it



Next month, this lecture will be fully available on our website

Thank you !

