Complications of urethral surgery
Complications of urethral surgery

Positioning-related complications

Oral complications

Genito-urinary 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

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Positioning-related complications

Standard stirrups
Positioning-related complications

Allen stirrups

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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%)

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Late complications

difficulty with mouth opening: score 0 (98%), score 1 (1.6%)
difficulty with smiling: score 0 (99%), score 2 (1%)
changes in facial physiognomy: score 0 (99%)
Patient satisfaction

“Would you do this type of operation again?”

Yes: 98.4% of patients

No: 1.6% of patients
Lip harvest

Negative aesthetic consequences

Unsatisfactory postoperative patient acceptance

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The tongue could represent a good harvesting site as an alternative to the cheek. Several reports in the literature describe tongue harvest with minimal complications. No significant postoperative complications were reported, and few reports in the literature detailed this method. Center for Reconstructive Urethral Surgery.
Complications of penile urethroplasty

- Urinary function
- Sexual function
- Aesthetic appearance of genitalia
Complications following flap urethroplasty

- penile hematoma
- skin necrosis
- fistula
- penile-glans torsion
- sacculation
Complications following graft urethroplasty

- infection
- meatal stenosis
- fistula
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

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?

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Complications of bulbar urethroplasty

Impotence?
End-to-end anastomosis
Substitution urethroplasty

- post-voiding dribbling
- loss of ejaculation
- semen sequestration in the urethral bulb

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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

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
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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

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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
Center for Reconstructive Urethral Surgery
A new muscle and nerve sparing ventral onlay graft bulbar urethroplasty
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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
Next month, this lecture will be fully available on our website

Thank you!