Guido Barbagli

Center for Reconstructive Urethral Surgery

Arezzo - Italy

E-mail: guido@rdn.it

Website: www.urethralcenter.it
Penile urethroplasty
Penile urethroplasty

One-stage or two-stage repair?
In patients with penile urethral strictures due to:

- trauma
- instrumentation
- catheter
- infection

**the penis is normal**: one-stage repair
Penis is normal

- glans
- penile skin
- corpus spongiosum
- dartos fascia
In patients with penile urethral strictures due to:

- failed hypospadias
- lichen sclerosus

the penis is abnormal: two-stage repair
Penis in patients with failed hypospadias repair

- No glans
- No penile skin

- No corpus spongiosum

Center for Reconstructive Urethral Surgery
Penis in patient with lichen sclerosus

Glans and penile skin are fully involved in the disease

Corpus spongosum and dartos fascia are fully involved in the disease
One-stage penile urethroplasty

Flap or graft?

Center for Reconstructive Urethral Surgery
Jordan’s flap
Jordan’s flap
Jordan’s flap
Jordan’s flap
Jordan’s flap
Dorsal Orandi’s flap
Dorsal Orandi’s flap

Center for Reconstructive Urethral Surgery
Dorsal Orandi’s flap
Dorsal Orandi’s flap
Dorsal Orandi’s flap
Dorsal Orandi’s flap
Dorsal Orandi’s flap
Dorsal Orandi’s flap
McAninch’s flap
McAninch’s flap
McAninch’s flap

Center for Reconstructive Urethral Surgery
McAninch’s flap
McAninch’s flap

Center for Reconstructive Urethral Surgery
Asopa’s graft
Asopa’s graft

Center for Reconstructive Urethral Surgery
Asopa’s graft

Center for Reconstructive Urethral Surgery
Asopa’s graft

Center for Reconstructive Urethral Surgery
Complications following flap urethroplasty

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

- infection
- meatal stenosis
- fistula
# One-stage penile flap or graft urethroplasty

## Results

<table>
<thead>
<tr>
<th>patients</th>
<th>type of repair</th>
<th>success</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>flap</td>
<td>66.7%</td>
</tr>
<tr>
<td>22</td>
<td>oral graft</td>
<td>81.8%</td>
</tr>
<tr>
<td>23</td>
<td>skin graft</td>
<td>78.3%</td>
</tr>
</tbody>
</table>

[www.urethralcenter.it](http://www.urethralcenter.it)
Basically, the choice between flap or graft one-stage urethroplasty should be made according to the status of the urethral plate and according to the surgeon background, training and preference.
Two-stage penile urethroplasty
Two-stage urethroplasty using oral mucosal graft
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

Center for Reconstructive Urethral Surgery
Second stage
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
Results of two-stage penile urethroplasty in patients with failed hypospadias repair

<table>
<thead>
<tr>
<th>Surgical techniques</th>
<th>Nº</th>
<th>Success</th>
<th>Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-stage techniques with penile skin</td>
<td>14</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Two-stage techniques with oral mucosa</td>
<td>17</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>31</td>
<td>21</td>
<td>10</td>
</tr>
</tbody>
</table>

Barbagli et al., Eur Urol 2006
Conclusions

Two-stage penile urethroplasty using oral graft is not a simple procedure and require a great expertise to avoid a lot of traps.

Moreover, this two-stage procedure, also in the hands of skilled surgeon, showed an high complications rate either following the first stage or the second stage.
Next month, this lecture will be fully available in our website

Welcome!