Obstetrical vaginal fistula: surgical approach

C-H Rochat, MD

Geneva Foundation for Medical Education and Research
Definition

- Tissue destruction secondary to the prolonged pressure of the head during obstructed labour (ischaemic laesion)
- Tissue laceration during instrumental delivery, Caesarian section or Caesarian hysterectomy
Abandoned from their families

Co-morbidity
- Infections
- Bladder stones
- Infertility
Prevalence

- estimated: 2 mio women worldwide
- Africa, Asia, South America
  - Sub-saharan Africa: 2/1000 deliveries
Simple fistula
- Non-fibrotic tissue
- Easy to access

Complex fistula
- Fibrotic tissue
- Loss of tissue
- Urethral involvement
- Retracted bladder
- Aberrant tract
- Previous failed surgery
Surgical tips

- Extended Trendelenburg position
- Scott retractor
- Headlight
- Sharp scissors
- Suture material

- Post op follow-up
- Cave: obstructed catheter!
Simple closure
Martius Flap
Tanguiesta case series

- Hospital northern Benin
- 10 urological missions since 1993
- Since 1996 specific visits for surgical fistula repair

- obstetrical fistulae
  \[ N = 132 \]
Case series 1996 - 2003

<table>
<thead>
<tr>
<th>Baseline data</th>
<th>n=132</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age y (median, range)</td>
<td>28.9 (15-63)</td>
</tr>
<tr>
<td>Parity n (median, range)</td>
<td>2.0 (1-11)</td>
</tr>
<tr>
<td>Duration y (median, range)</td>
<td>3.0 (0.1-20)</td>
</tr>
<tr>
<td>Previous attempt for fistula repair n (%)</td>
<td>42 (31.5)</td>
</tr>
<tr>
<td>Lost to follow-up n (%)</td>
<td>20 (15.03)</td>
</tr>
</tbody>
</table>
Case series 1996 - 2003 Localisation of vesicovaginal fistulae

- Urethral and/or Trigonal: 79%
- Supra-trigonal: 21%
Case series 1996 – 2003
Surgical approach

- Vaginal 76%
- Abdominal 18.6%
- Combined 5.4%

- Urinary diversion 6 cases
- Recto-vaginal fistulae 5 cases
Outcome of Vesico-vaginal fistula repair
n=100

- Success rate 84%
- Stress incontinence 21%
- Complications 1 fatal peritonitis
- 3 reinterventions for secondary suture
Conclusions

- Majority can be treated by vaginal approach
- Martius flap preferable for urethral suspension and tissue interposition
- Urinary diversion rarely mandatory
- Stress incontinence remains an issue for further improvement
### Case series 1996 - 2002

#### Localisation

<table>
<thead>
<tr>
<th>Location</th>
<th>Count (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urethral n (%)</td>
<td>35 (34.7)</td>
</tr>
<tr>
<td>Trigonal n (%)</td>
<td>60 (59)</td>
</tr>
<tr>
<td>Supratrigonal n (%)</td>
<td>39 (38.6)</td>
</tr>
</tbody>
</table>
Case series 1996 - 2002

- Complications at the time of delivery
  - perinatal mortality: 98%
  - Ruptured uterus: 10%

- Sectio rate: 40%

- Maternal mortality?
Case series 1996 – 2002
Surgical technique

<table>
<thead>
<tr>
<th>Surgical Technique</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martius graft n (%)</td>
<td>32 (31.7)</td>
</tr>
<tr>
<td>Cutaneous graft n (%)</td>
<td>12 (11.9)</td>
</tr>
</tbody>
</table>
## Case series 1996 – 2003

### Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Vesico-vaginal Fistula</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=112</td>
<td></td>
</tr>
<tr>
<td><strong>Success rate n (%)</strong></td>
<td>84 (76.4)</td>
</tr>
<tr>
<td><strong>Treatment failure</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Stress incontinence n (%)</strong></td>
<td>21 (24)</td>
</tr>
<tr>
<td><strong>Urinary diversion n (%)</strong> (uretero – sigmoidostomy)</td>
<td>6 (4.6)</td>
</tr>
</tbody>
</table>

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**Note:**
- The success rate for vesico-vaginal fistula closure is 76.4%.
- 16 cases had treatment failure.
- 24% of cases had stress incontinence.
- 4.6% of cases required urinary diversion.
## Case series 1996 – 2002

### Outcomes

<table>
<thead>
<tr>
<th></th>
<th>VVF (n = 101)</th>
<th>RVF (n = 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Success rate n (%)</strong></td>
<td>60 (59.4)</td>
<td>4 (67)</td>
</tr>
<tr>
<td><strong>Complications n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress incontinence</td>
<td>13 (21.6)</td>
<td></td>
</tr>
<tr>
<td>Bladder stone</td>
<td>6 (5.9)</td>
<td></td>
</tr>
<tr>
<td>Urinary diversion n (%)</td>
<td>6 (5.9)</td>
<td></td>
</tr>
</tbody>
</table>

(ureterosigmoidostomy)
Case series 1996 - 2003
Localisation of fistulae

- Urethral: 4.50%
- Trigonal: 19%
- Supratrigonal: 22%
- Combined: 42.10%
- Others: 9.80%
- Missing data: 3%