door open pelvic physiotherapist: pre? Post-operative? What is the evidence?:
Bary Berghmans PhD MSc associate professor

‘Vaginal Fistulae and Pelvic Floor Rehabilitation’
“It was painful. It was bad. When I felt the urge to pass urine it would just flow without stopping. If you stand up it pours. There was no stopping it, no break. Some were bad to me, some treated me with pity. They looked down upon me. They said I am spoilt, they said I was spoiling the ward. At first it was the nurse who insulted me. She said: ‘For how long are you going to stay here? You know you have really spoilt this ward!’ She said it every day. Others treated me kindly saying: ‘Just bear it for now, you will get well’. They pitied me.”

(Chepkiror, aged 24, divorced)
“People my age believe that I am useless [because] I had a fistula.” (Chepengat, age 17, never married)

<table>
<thead>
<tr>
<th>Name</th>
<th>Age at interview (age at fistula)</th>
<th>Marital status</th>
<th>No. children</th>
<th>Months after surgery</th>
<th>Degree of healing/leaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheptoo</td>
<td>23 (&lt;19)</td>
<td>Married</td>
<td>0</td>
<td>3</td>
<td>Healed</td>
</tr>
<tr>
<td>Chepengat</td>
<td>17&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Single</td>
<td>0</td>
<td>3</td>
<td>Incontinent of urine</td>
</tr>
<tr>
<td>Chepkiror</td>
<td>24 (20)</td>
<td>Separated</td>
<td>0</td>
<td>12</td>
<td>Healed</td>
</tr>
<tr>
<td>Chebet</td>
<td>17&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Married</td>
<td>0</td>
<td>3</td>
<td>Incontinent of urine</td>
</tr>
<tr>
<td>Cheptiros</td>
<td>20&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Divorced</td>
<td>0</td>
<td>6</td>
<td>Healed</td>
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<tr>
<td>Cheptios</td>
<td>17 (12)</td>
<td>Single</td>
<td>0</td>
<td>12</td>
<td>Incontinent of urine</td>
</tr>
<tr>
<td>Tingoyi</td>
<td>30 (26)</td>
<td>Married</td>
<td>4</td>
<td>36</td>
<td>Healed</td>
</tr>
<tr>
<td>Katiraya</td>
<td>26&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Separated</td>
<td>3</td>
<td>Not stated</td>
<td>Incontinent of urine</td>
</tr>
</tbody>
</table>

<sup>a</sup> Age at fistula not stated
scope & impact vaginal fistula

- Obstetric fistula most debilitating and devastating all female morbid conditions *Angioli 2000*

- Continuous urinary and/or fecal incontinence (85%), excoriation adjacent genital areas, painful rashes, offensive odor *Ahmed 2007*

- ‘At the world’s current capacity to repair fistula, it would take at least 400 years to clear the backlog of patients provided that there are no more new cases’ *Browning 2004*

- ‘Life changes forever’ *Ahmed 2007*
scope & impact vaginal fistula

- obstructed labor injury complex *Angioli 2000*

- 80% women chronic skin excoriation from direct irritation caused by urine; in addition, amenorrhea, vaginal stenosis, infertility, bladder calculi, infection, and footdrop (due to neurological injury) *Ahmed 2007*

- psychological stress, depression (73%) *Weston 2011*, nutritional deficiency, underweight (37%) *Arrowsmith 1996, Kelly 1993*

- social-cultural isolation, divorce (63%), ‘social calamity’, ‘punishment from God’, sexual problems, stigma, embarrassment (87%) *Ahmed 2007, Goh 2005*
management vaginal fistula

- Obstetric fistula is a preventable and treatable condition if timely and universal access to obstetric care and surgical repair is available. (Hawkins, 2013)


- In Kenya, the African Medical and Research Foundation reports an obstetric fistula incidence of 3000 new cases/year (1–2 cases/1000 deliveries) with only 7.5% of patients receiving treatment. (Ministry of Health, Kenya, 2004)
management vaginal fistula

- surgery only successful treatment; problem: availability (42% deliveries by TBAs, skills surgeon, young women ↑ risk)

- TBA: ‘traditional, independent, non-formally trained and community-based provider of care during pregnancy, childbirth and post-natal period’ *WHO 2004*

- success fistula closure 86% for first-time vesicovaginal fistula (VVF) repairs and 67% for first-time VVF combined with rectovaginal fistula (RVF) repairs

- among women who had previously attempted VVF or combined VVF/RVF repairs, 73% and 50% fistulas, respectively, repaired successfully
management vaginal fistula

- first-time repair significantly associated with surgical success compared with patients with history previous repair attempts *Hawkins 2013*

- but: successful social reintegration following fistula repair?

- holistic management approach, including mental health care and family support *Ministry of Health, Kenya 2004*

- structured program health education and physiotherapy by experienced nurses and physiotherapists improves likelihood successful outcome after surgical repair obstetric fistula *Castille 2014*
physiotherapy vaginal fistula

- success surgery depends on many factors such as degree scarring and tissue loss, size and location fistula, and surgeon’s experience *Castille 2014*

- failure some repairs attributable to lack knowledge by women about their situation, resulting in particular in mismanagement abdominal pressure especially in early postoperative days *Castille 2014*

- surgical success determined not only by technical factors and anatomy and complexity fistula, but also by factors that women can control: activities daily living, such as coughing or defecation, that increase abdominal pressure *Castille 2014*

so….., physiotherapy!!!!?
physiotherapy vaginal fistula

- Program health education and management abdominal pressure through physiotherapy tested to try to reduce to minimum harmful effects of these pressures on postoperative recovery no RCT!! *Castille 2014*

- Before surgery, women in study group participated in several group sessions at camp and individual sessions at physiotherapy ward to learn various techniques to reduce abdominal pressure during everyday activities *Castille 2014*

- Nurses provided screening, hospital accompaniment, and follow-up women *Castille 2014*
Prévention et protection du périnée

Position couchée
- Sur le dos
- Sur le côté
- Sur le ventre

Soulever et porter une charge légère

S'asseoir, se lever, se re-coucher

Position assise

Passer le balai

Activités et mouvements interdits pendant 3 mois
physiotherapy vaginal fistula

- likelihood recovery 1.2 times higher for women who received physiotherapy than for control group *Castille 2014*

- for women whose fistula closed after surgery, health education and physiotherapy program significantly reduced risk stress incontinence after surgery; 30 (52.6%) women with successful surgery in control group and 17 (22.1%) women in physiotherapy group continued to have stress incontinence *Castille 2014*

- conclusion: program health education and simple intervention by physiotherapist can reduce number of surgery failures. physiotherapy (*management abdominal pressure and pelvic floor training ??????) and health education sessions positive influence on outcome surgery with no adverse effects *Castille 2014*

- also after 1 year, including ↑QoL *Castille 2015*
physiotherapy vaginal fistula

- pilot program single-cohort observational study with repeated measures at HEAL Africa Hospital, Goma, Democratic Republic of Congo *Keyser 2014*

- 205 women; 161 physical therapy group, average 9.45 sessions

- 161 women examined postoperatively, 102 (63.4%) reported no incontinence; they remained continent at discharge, of 21 who indicated change in level incontinence during postoperative physical therapy, 15 (71.4%) improved
physiotherapy vaginal fistula program proposal

admission

- postoperative nursing and physical therapy care—days 1–14
  - nurses mobilize patient; encourage out-of-bed activity with assistance if needed
  - physical therapy in small groups or one-to-one; submaximal pelvic floor muscle exercises with the catheter still in place

- postoperative physical therapy examination and treatment—days 15+
  - repeat physical therapy assessment
  - exercise/functional activity progression

- pelvic floor muscle exercises; goal of 10 repetitions, 10-second hold, 10-second relaxation

Keyser 2014
physiotherapy vaginal fistula

program proposal

discharge

- coordinated breathing, abdominal, and pelvic muscle exercise progression while supine, on all fours, or standing; functional tasks

- bowel and bladder training, as needed: timed voiding, double or triple voiding, urgency response, control, and suppression; lifestyle modifications (adequate water intake, avoidance caffeine)

- interactive group session with nurse, physiotherapist, and counselor

  o female reproductive anatomy; definition and causes of fistula; dispelling myths surrounding reproduction, childbirth, and fistula; pregnancy model for demonstration
  o review pelvic floor physical therapy exercises
  o family planning education

Keyser 2014
mean pelvic floor muscle strength from 14 days postsurgery to discharge
Conclusion: pelvic floor physical therapy could have significant results in women with gynecologic fistula, may be important adjunctive treatment in comprehensive fistula care, and warrants further investigation Keyser 2014.
physiotherapy vaginal fistula

- functional outcomes (measured via level of incontinence) improved for 71.4% of patients who participated in physical therapy and demonstrated a change in status during this 2–3-week period *Keyser 2014*

- limitations program:
  - physicians and physiotherapists reported needing more support for education and skills
  - administrative changes and staff turnover within hospital
  - conflict and insecurity in region
  - incomplete or missing patient charts and lapses in data entry
  - insufficient follow-up time patients
  - insufficient funding for program

*Keyser 2014*
Physiotherapeutic Diagnostic Process

based on medical diagnosis and data PDP
Objective

using MEDICAL DIAGNOSIS to be able to make an inventarisation of the nature and severity of the health problem UI, and to investigate, using the medical data, the extent of influence of a specific therapy on this health problem

i.e., if and to what extent is an intervention adequate and significant

also, to rule out other pathology and contra-indications!!

medical diagnosis based on ICD and ICPC
PDP based on ICF

International Classification of Functioning, Disability & Health 2002

organ level = impairment

personal level = disability

social-cultural level = restriction in participation

consequences!!
PDP

history-taking
functional tests
physical examination:
observation
digital palpation
evaluation
analysis
statement of targets intervention
Pelvic floor muscle functional assessment

Patient (number): 
Researcher: 
Date: 
Time: 
Number of fingers: 1 2  
Position: 

**INSPECTION during moving**

<table>
<thead>
<tr>
<th>Inv. mov. visible</th>
<th>Yes</th>
<th>No</th>
<th>Desc.</th>
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<tbody>
<tr>
<td>Cocontraction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RA/TrA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaphragm</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Adductors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gluteal</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Relaxation visible</td>
<td>Good</td>
<td>Delayed</td>
<td>Incomplete</td>
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<tr>
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</table>

**INSPECTION perineal movement during coughing and pushing**

<table>
<thead>
<tr>
<th>Coughing</th>
<th>Inv.</th>
<th>None</th>
<th>Desc.</th>
</tr>
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<tbody>
<tr>
<td>- in case inwards</td>
<td>before</td>
<td>during</td>
<td>after</td>
</tr>
<tr>
<td>Pushing</td>
<td>Desc</td>
<td>No</td>
<td>Inv.</td>
</tr>
</tbody>
</table>

**PALPATION in rest**

<table>
<thead>
<tr>
<th>Pain</th>
<th>No</th>
<th>Yes</th>
<th>R</th>
<th>L</th>
<th>A</th>
<th>P</th>
</tr>
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<tbody>
<tr>
<td>VAS</td>
<td>0-100</td>
<td></td>
<td></td>
<td></td>
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</table>

**PALPATION during moving**

| Conscious maximal contraction | |
|------------------------------|------|---|---|---|---|
| Urethral lift | Strong | Normal | Weak | Absent |
| Levators closing | Strong | Normal | Weak | Absent |
| Symmetry L/R | Yes | No | R > L | L > R |
| Level contraction | Strong | Normal | Weak | Absent |

<table>
<thead>
<tr>
<th>Endurance</th>
<th>≥10</th>
<th>9 - 7</th>
<th>6 - 4</th>
<th>3 - 1</th>
<th>0</th>
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</thead>
<tbody>
<tr>
<td>Explosive strength</td>
<td>≥15</td>
<td>14 - 11</td>
<td>10 - 6</td>
<td>5 - 1</td>
<td>0</td>
</tr>
</tbody>
</table>

| Level of relaxation after conscious maximal contraction | |
|-----------------------------------------------------------|---|---|---|
| Complete <restlevel | Partly >restlevel | Incomplete >restlevel | Absent |
| Delayed | Yes | No |

<table>
<thead>
<tr>
<th>Unconscious contraction during coughing and pushing</th>
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</thead>
<tbody>
<tr>
<td>Coughing</td>
<td></td>
</tr>
<tr>
<td>Reflexcontraction</td>
<td>Yes</td>
</tr>
<tr>
<td>Descent perineum</td>
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<tr>
<td>UI</td>
<td>No</td>
</tr>
<tr>
<td>Flatus/Fi</td>
<td>No</td>
</tr>
<tr>
<td>Pushing</td>
<td></td>
</tr>
<tr>
<td>Relaxation</td>
<td>Yes</td>
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</table>

**CONCLUSION** condition PFMF

<table>
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<tr>
<th>Overactive</th>
<th>Normal</th>
<th>Coordination disorder</th>
<th>Underactive</th>
<th>Non functional</th>
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</thead>
</table>

Berghmans, KNGF 2011
Ik wilde even kijken wat je aan het doen was? Effe Checkke...