Native tissue pelvic floor reconstructive surgery in the HIV-positive woman: Results from a prospective cohort

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CONFLICT OF INTEREST

Nothing to disclose
BACKGROUND

• HIV epidemic
• South African numbers
• Changing face of HIV
• Surgical bias
• History of HIV and pelvic floor dysfunction
• Study aims
MATERIALS AND METHODS

• Prospective observational case-cohort
• Urogynaecology referral unit
• Matching 1:2
• Metrics
MATERIALS AND METHODS

• Missing data
• Surgical failure
• Statistical analysis
  – Categorical data
  – Continuous data
  – Significance
RESULTS

- Numbers:

  - Total: 1052
  - HIVp: 79
  - Native tissue: 50
  - Studied: 41
  - Mesh repair: 29
  - Lost / Data: 9
  - HIVn: 973
RESULTS

- Procedures
  - Abdominal (VVF, uterosacral plication)
  - Vaginal (AP repair, Sacrospinous suspensions, VVF, RVF, perineal repair)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>HIVp (n=41)</th>
<th>HIVn (n=74)</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years) (median;range)</td>
<td>44.5 (19;68)</td>
<td>45.5 (19;79)</td>
<td>0.53</td>
</tr>
<tr>
<td>Parity (median;range)</td>
<td>3 (1;6)</td>
<td>3 (0;6)</td>
<td>0.09</td>
</tr>
<tr>
<td>BMI (kg/m2) (median;range)</td>
<td>27.6 (15.6;39.9)</td>
<td>28 (20.8;47.3)</td>
<td>0.55</td>
</tr>
<tr>
<td>Menopause (%)</td>
<td>14 (34.1)</td>
<td>31 (41.9)</td>
<td>0.43</td>
</tr>
<tr>
<td>Hormonal therapy use (%)</td>
<td>2 (4.9)</td>
<td>13 (17.6)</td>
<td>0.08</td>
</tr>
<tr>
<td>Previous hysterectomy (%)</td>
<td>7 (17.1)</td>
<td>14 (18.9)</td>
<td>0.81</td>
</tr>
<tr>
<td>Previous prolapse surgery (%)</td>
<td>4 (9.8)</td>
<td>10 (13.5)</td>
<td>0.76</td>
</tr>
<tr>
<td>Previous incontinence surgery (%)</td>
<td>6 (14.6)</td>
<td>10 (13.5)</td>
<td>0.87</td>
</tr>
</tbody>
</table>
RESULTS

• Follow-up:
  – HIVp: 28 months (18;64)
  – HIVn: 30 months (18;60)

• CD-4 count: 380 /mm³ (164;1200)

• Antiretroviral treatment: 87.8%

• Pre-op differences (POP-Q/QOL):
  – HIVn: Posterior compartment (p=0.02)
  – HIVn: Genital hiatus (p=0.05)
## RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>HIVp (n=41)</th>
<th>HIVn (n=74)</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure time (minutes)</td>
<td>74 (39;145)</td>
<td>65 (27;150)</td>
<td>0.03*</td>
</tr>
<tr>
<td>Blood loss (ml)</td>
<td>98 (10;305)</td>
<td>78 (5;340)</td>
<td>0.06</td>
</tr>
<tr>
<td>Hospital stay (days)</td>
<td>4 (2;9)</td>
<td>3.3 (2;7)</td>
<td>0.01*</td>
</tr>
<tr>
<td>Operative complications (%)</td>
<td>9 (21.9)</td>
<td>11 (14.9)</td>
<td>0.44</td>
</tr>
<tr>
<td>Surgical site infection (%)</td>
<td>3 (7.9)</td>
<td>4 (5.4)</td>
<td>0.69</td>
</tr>
<tr>
<td>Urinary tract infection (%)</td>
<td>4 (9.8)</td>
<td>7 (9.5)</td>
<td>0.95</td>
</tr>
<tr>
<td>Post-op antibiotics (%)</td>
<td>8 (19.5)</td>
<td>8 (10.3)</td>
<td>0.08</td>
</tr>
</tbody>
</table>
RESULTS

• Post-op differences (POP-Q):
  – HIVn: Genital hiatus (p=0.01)
  – HIVn: Perineal body (p=0.01)

• Other outcomes:
  – Surgical success: HIVp 78% vs HIVn 89% (p=0.16)
  – Repeat surgery 17% vs 6.7% (p=0.11)
  – Complications surgery (p=0.93)
  – QOL similarly improved (p=0.64)
DISCUSSION

- No significant differences in surgical outcome (78% vs 89%, p=0.11)
  - Similar results in colorectal surgery (Gahagan, et al. 2016)
  - VVF cure rates equivalent – short term (Tebeu, et al. 2014)
  - Immunosuppressed patients (Hoda, et al. 2010)

- Role of CD4-count
  - < 250 /mm³ in 24%
  - No relation to peri-operative infections (p=0.77), or failed surgery (p=0.77)
  - Conflicting literature (Chichom-Mefire 2015, Zhang 2012, King 2015)
    • Beware: AIDS, emergency surgery, infection
LIMITATIONS

• Other factors possibly influencing outcome
  – Viral load, albumin, nutritional status, total WCC
  – Spectrum of pelvic floor reconstruction procedures
  – Small overall numbers
SIGNIFICANCE

• Clinical:
  – 1st report on pelvic floor surgery outcomes in HIV positive women
  – Robust, reassuring data
  – Non-discriminatory approach acceptable in modern medicine
SIGNIFICANCE

• Scientific:
  – Is HIV protective against pelvic organ prolapse?
  – < 5% (prevalence approximately 20%)
  – Can this disease provide us with answers?
  – Further exploration warranted.
Thank you
REFERENCES


