Fertility after myomectomy at Dakar (Senegal)

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Objectives

- Determine the **epidemiological profile of patients**
- Investigate **factors associated** with fertility after myomectomy
- Specify the **pregnancy rate after myomectomy**
Type of study

- Descriptive and analytical retrospective study

- Cohort of patients wishing pregnancy after myomectomy

- Between 2009 and 2013 (5 years)

- Military Hospital of Ouakam
Methodology

• One hundred and twenty (120) patients were contacted by phone to participate in the study

• Seventy-six (76) wanted pregnancy (63.3%)

• Parameters analyzed: age, parity, indications of myomectomy and fertility after myomectomy
Inclusion criteria

- Free and informed consent
- Patients who underwent myomectomy
- Patients who want to be pregnant
Data analysis

• Epi Info version 6

• Chi2-Square test was used for comparisons

• The tests were significant when the probability associated was less than 5% ($\alpha < 0.05$)
Results
Patients characteristics

- **Average age**: 37.2 years (25 and 46),
- **Average parity**: 1 (0 and 5)
- Married (94.7%)
## Reasons for consultation of patients

<table>
<thead>
<tr>
<th>Reasons for consultation</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menstrual disorders</td>
<td>61</td>
<td>13.2</td>
</tr>
<tr>
<td>Infertility</td>
<td>50</td>
<td>65.8</td>
</tr>
<tr>
<td>Pelvic pains</td>
<td>27</td>
<td>35.5</td>
</tr>
<tr>
<td>Pelvic mass</td>
<td>13</td>
<td>17.1</td>
</tr>
<tr>
<td>Prior abortion</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Myoma</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Constipation</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>76</td>
<td>100</td>
</tr>
</tbody>
</table>
Topography of myomas

<table>
<thead>
<tr>
<th>Topography of myoma</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2</td>
<td>10</td>
<td>13.2</td>
</tr>
<tr>
<td>Type 3</td>
<td>11</td>
<td>14.5</td>
</tr>
<tr>
<td>Type 4</td>
<td>34</td>
<td>44.7</td>
</tr>
<tr>
<td>Type 5</td>
<td>46</td>
<td>60.5</td>
</tr>
<tr>
<td>Type 6</td>
<td>46</td>
<td>60.5</td>
</tr>
</tbody>
</table>
## Surgical indications

<table>
<thead>
<tr>
<th>Surgical indications</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infertility</td>
<td>30</td>
<td>39.5</td>
</tr>
<tr>
<td>Menstrual disorders</td>
<td>25</td>
<td>32.9</td>
</tr>
<tr>
<td>Pelvic pains</td>
<td>15</td>
<td>19.7</td>
</tr>
<tr>
<td>Pelvic mass with compression signs</td>
<td>6</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>76</td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Fertility after myomectomy

- Average time (setback) of 18 months,
- 25% (19/76) of pregnancies
Mode of delivery

- Cesarienne en urgence: 15.4%
- AVB: 15.4%
- Cesarienne programmée: 69.2%
### Fertility after myomectomy and age

<table>
<thead>
<tr>
<th>Ages (years)</th>
<th>Pregnancy after myomectomy</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>[25-29]</td>
<td></td>
<td>2 (40%)</td>
<td>3 (60%)</td>
<td>5</td>
</tr>
<tr>
<td>[30-34]</td>
<td></td>
<td>6 (42.9%)</td>
<td>8 (57.1%)</td>
<td>14</td>
</tr>
<tr>
<td>[35-39]</td>
<td></td>
<td>7 (22.6%)</td>
<td>24 (77.4%)</td>
<td>31</td>
</tr>
<tr>
<td>&gt; 39</td>
<td></td>
<td>4 (15.4%)</td>
<td>22 (84.6%)</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>19</td>
<td>57</td>
<td>76</td>
</tr>
</tbody>
</table>

p = 0.042
### Fertility after myomectomy and parity

<table>
<thead>
<tr>
<th>Parity</th>
<th>Pregnancy after Yes</th>
<th>Pregnancy after No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nulliparous</td>
<td>8 (14.8%)</td>
<td>46 (85.2%)</td>
<td>54</td>
</tr>
<tr>
<td>Primipare</td>
<td>6 (54.6%)</td>
<td>5 (45.4%)</td>
<td>11</td>
</tr>
<tr>
<td>Multipare</td>
<td>5 (44.4%)</td>
<td>6 (55.6%)</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td><strong>57</strong></td>
<td><strong>76</strong></td>
</tr>
</tbody>
</table>

\[ p = 0.0004 \]
### Fertility after myomectomy and prior infertility

<table>
<thead>
<tr>
<th>Prior infertility</th>
<th>Pregnancy after myomectomy</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8 (16%)</td>
<td>42 (84%)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>11 (42.3%)</td>
<td>15 (57.7%)</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>57</td>
<td>76</td>
<td></td>
</tr>
</tbody>
</table>

*p = 0.012*
Comments
Conception rate

- 76/120 (63.3%) had a desire for pregnancy
- 19/76 (25%) of pregnancies
- Roux: 13% of pregnancies
- But ... sample of 15 patients
Conception rate

• Prospective study comparing 106 women infertile with myomas and 106 infertile women without myomas

• Conception rate significantly decreased in case of myomas (11% versus 25%; p = 0.02)

Conception rate

• No details on the size, number and location of myomas,

• However that study helps to demonstrate responsibility of fibroids on fertility in case of spontaneous procreation.
Factors influencing fertility after myomectomy

Risk factors found in our series

- patient age ($p = 0.042$) … > 39 years old
- parity ($p = 0.004$) … nulliparous
- infertility before myomectomy ($p = 0.012$)
Factors influencing fertility after myomectomy

- Female fertility declines with age
- His fall becomes important after 30 years old
- Fertility is almost zero at 45 years old
- **Main mechanism**: ovarian reserve alteration accelerated after 38 years old

Factors influencing fertility after myomectomy

• **ROUX**: all patients who were able to achieve a pregnancy had already given birth before myomectomy,

• **Against…** 57.9% in our study

Factors influencing fertility after myomectomy

• **Nulliparity = poor prognosis**;

• **Our series**: we had more infertile patients after the myomectomy (78% of infertility cases) in the group of nulliparous comparing to the others
Factors influencing fertility after myomectomy

- Infertility before myomectomy = poor prognosis for later achieving pregnancy,

- In our series: only 8/50 infertile patients (16%) achieved a pregnancy after myomectomy
Myoma and fertility

• Role of fibroids in infertility is unclear

• Prevalence of fibroids is more important in the population of infertile women
  - 2.7% in the second trimester of pregnancy
  - 12.6% in infertile women treated by IVF

Myoma and fertility

• Infertility is often multifactorial

• The only myomectomy would not restore fertility

• Quid: relevance of a myomectomy for infertility?
• Make a full assessment of fertility before myomectomy for:

- nulliparous

- women over 39 years old

- infertile woman
Conclusion

- Pre-operative counseling to explain that:
  - myomectomy is a step in the treatment
  - myomectomy is rarely sufficient by itself to restore fertility
Thanks you...