Laparoscopic radical hysterectomy for invasive cervical cancers in early stage
Personnal experience

Dr Moulay Nabil
MD
Rabat Morocco
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• Cervical cancer is the early stage of a good prognosis.
• The major challenge for the management is to limit the morbidity of the treatment while maintaining good oncological results.
This presentation will discuss our experience of laparoscopic radical hysterectomy in treatment of early stage of invasive cervical carcinoma about a personal series of 12 cases over a period of 5 years (2008 =>2012).

Contribution of laparoscopy in the treatment of cervical cancer
The feasibility, the surgical radicality (number of nodes, and parametrectomy), the oncological results are the same by laparoscopy or by laparotomy for early stage cancers.

There is no significant difference between the two approaches for urinary, vascular or digestive morbidity.

There is less adhesion, same cost compared to laparotomy, but the operative outcome is significantly simpler.

Expertise in laparoscopic surgery and a relatively slow learning curve is necessary to realize these techniques left in the majority of studies hardness operative longer than by laparotomy.

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**Classification of cervical cancer**

**FIGO 2009**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Cancer strictly limited to the cervix</td>
</tr>
<tr>
<td>Ia</td>
<td>Lésions with invasion less than 5 mm</td>
</tr>
<tr>
<td>Ia1</td>
<td>Horizontal extension should not exceed 7 mm</td>
</tr>
<tr>
<td>Ia2</td>
<td>Lésions with invasion &gt; 5 mm</td>
</tr>
<tr>
<td>Ib</td>
<td>Lésions &lt; 4 cm</td>
</tr>
<tr>
<td>Ib1</td>
<td>Lésions &gt; 4 cm</td>
</tr>
<tr>
<td>Ib2</td>
<td>Lésions &gt; 4 cm</td>
</tr>
</tbody>
</table>

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Our expérience

Radical hysterectomy for early cervical carcinoma
(stade 1 A 2 => stade 1 B1)

Epidémiological data

- PAP test post coital bleeding
- Troubles of cycle
- Chronic Leucorrhéa
Histology data

**Diagnostic on cone biopsy**
- 3 patients (25%) => in sano loop conisation for CIN 3;
  - 1 case => invasive squamous lesion between 3 and 5 mm depth, with lympho vascular embols
  - 2 cases => invasive squamous lesion more than 5 mm depth (LVE and surface extension unspecified)

**Diagnostic on biopsy**
- 8 cases => invasive squamous lesion more than 5 mm in depth (in 3 cases the notion of lympho vascular emboli is specified and positive)
- 1 case => invasive adénocarcinoma
CLINICAL EXAMINATION DATA

The clinical examination

1. Evaluated tumor size (less than 4 cm => 100 % cases)
2. The extension to the vagina (no => 100 % cases).
3. The parametrial involvement (absence => 100% cases).

Tumors less than 4 cm without parametrial or vaginal involvement are regarded as early stages (IB1 or less).

DATA IMAGING

The MRI is currently the best imaging test to clarify the loco regional extension for cervical cancer.

The MRI
- Estimated tumor volume:
  - 2 cm => 7 case
  - 3 cm => 5 case
- Allows locoregional staging => 0
  - paramètrium, vagina, bladder, rectum, pelvic wall.
- Allows node staging => 0
  - para aortic and pelvic lymph nodes.

Our indications

Our options for the treatment of stages IA2
- Cone biopsy
  - micro invasif Carcinoma < 3 mm et <7 mm
  - Without lympho vascular embol
  - Pelvic lymphadenectomy + frozen section + Laparoscopic hysterectomy
- Pregnancy needed
  - Lymphadenectomy frozen section + ablation of if in sano conisation
  - Laparoscopic radical hysterectomy
Our options for the treatment of stages IB1

- Pelvic lymphadenectomy
  - Suspicious nodes
    - Frozen section
      - N positif Radiochemothérapie
      - N négatif Laparoscopic radical hysterectomy
  - Non suspicious nodes
    - Laparoscopic radical hysterectomy

Operative technique for radical hysterectomy
OPERATING PROCEDURES

Operative time

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of case</th>
<th>Operative time (in hour)</th>
<th>Laparotomy conversion or stopping the procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1</td>
<td>7 h</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>2</td>
<td>5 h</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
<td>4 h 30 mn (4 h / 6 h)</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>3</td>
<td>4 h 30 mn (4 h / 5 h)</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>4 h 1 h 30 / 4 h 30</td>
<td>1</td>
</tr>
</tbody>
</table>

Operative complication 1/12 => 8 %

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of case</th>
<th>Urinary Fistule</th>
<th>Digestive bleeding</th>
<th>Operative complication for 1/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2009</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- Early urinary morbidity is increased in cases treated by laparoscopy (10 %) compared with cases treated by laparotomy (5-6 %).
- In a more recent study, Uccella et al. found the same urinary morbidity by laparoscopy and laparotomy.
- Impact of bowel injuries, vascular wounds and the occurrence of major bleeding are the same regardless of the surgical approach used.


hospital stay : average = \textbf{2 days (5 days Spirtos)}

<table>
<thead>
<tr>
<th>Weirteim coelo</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Hospital stay</td>
<td>72 h</td>
<td>48 h</td>
<td>48 h</td>
<td>48 h</td>
<td>48 h</td>
</tr>
</tbody>
</table>


Final histology

<table>
<thead>
<tr>
<th>Weirteim coelo</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Number of nodes</td>
<td>8</td>
<td>12</td>
<td>17</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>N negative</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>66%</td>
</tr>
<tr>
<td>N positive</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>34%</td>
</tr>
</tbody>
</table>


The only case of nodal invasion is a invasive squamous 3 cm lesion with lympho vascular emboli. Pelvic lymphadenectomy alone was performed. The patient is entrusted for a radiochemotherapy protocol.
Utérine histology:
- Invasiv épidermoïde carcinoma 11/12 => 91%
- Adenocarcinoma 1/12 => 9%

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td>1 B 1</td>
<td>2 B 1</td>
<td>3 B 1</td>
<td>1 B 2</td>
<td>2 B 1</td>
</tr>
<tr>
<td>Histology Type</td>
<td>1 Invasiv épidermoïde carcinoma</td>
<td>2 épidermoïde carcinoma</td>
<td>3 épidermoïde carcinoma</td>
<td>2 épidermoïde carcinoma</td>
<td>2 épidermoïde carcinoma</td>
</tr>
</tbody>
</table>

Post opérativ treatment

Postopérativ curitherapy
- 90% of patients have benefitted from curitherapy between 6 and 8 weeks after the intervention by mutual agreement with our oncologists.

Postopérativ radiochemothérapie
- One patient benefited radiochemotherapy on metastatic lymph nodes.
MEDIUM-TERM FOLLOW-UP

Post opérativ data

• Mean: 2.5 years (range 5 months => 5 years)
• Patients are reviewed 1 times every 6 months for control;
  − 11/12 patients had a clinical examination in addition to a normal social and sexual life.
  − 1/12 patient (radiochemotherapy) is lost sight despite repeated attempts to contact.


Conclusion
In Morocco, radical hysterectomy by open procedure is a standard in treatment of cervical cancers.

Numerous studies demonstrate that the feasibility, the radicality and oncological results obtained by laparoscopic route are identical by laparotomy, to treat cancers in early stage (I A2AIB2).

Similarly laparoscopy reduces significantly hospitalization, bloodless and morbidity without increasing urinary, digestive and sexual complication.

We think under the guide of expertise in endoscopy, this type of cancer at early stage can be treated by laparoscopic surgery.