Choosing a rout for Hysterectomy

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INTRODUCTION

Hysterectomy can be performed

- Vaginally
- Abdominally
- Laparoscopically
- With robot-assisted laparoscopy

✓ Or by combining two of these four routes, such as in laparoscopically-assisted vaginal hysterectomy or laparoscopic hysterectomy combined with a mini-laparotomy
Hysterectomy has been associated with some alterations in physical and mental quality-of-life measures, body image, and aspects of sexual activity, with few differences among surgical routes.
SELECTING THE ROUTE OF HYSTERECTOMY

*vaginal hysterectomy* is the preferred approach for most patients

If a vaginal hysterectomy is not feasible → then *laparoscopic hysterectomy* is performed

*Abdominal hysterectomy* is the default procedure when others cannot manage the patient's clinical situation or when facilities cannot support a specific procedure
Important factors for choosing a root

1. Extent of gynecologic pathology ➔ What is the best access to appropriately treat the disease?

2. Relative risks and benefits of hysterectomy route ➔ Which technique is associated with the lowest risk of complication for this patient?
Important factors for choosing a root

3. Need to perform additional procedures → What is the best access for management of concomitant pathology?

4. Patient preferences → Does the informed patient have a preference for hysterectomy approach?

5. Surgeon's competence, preference, and available support facilities.
Advantages and disadvantages of surgical approaches

- Vaginal hysterectomy is associated with better outcomes and fewer complications than other approaches.

Vaginal hysterectomy versus abdominal hysterectomy:

- Quicker return to normal activities by approximately 12 days
- Reduction of hospital stay by approximately one day
- Decreased postoperative febrile morbidities
Vaginal hysterectomy versus total laparoscopic hysterectomy:

<table>
<thead>
<tr>
<th>Vaginal hysterectomy</th>
<th>Total laparoscopic hysterectomy</th>
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</thead>
<tbody>
<tr>
<td>17 minutes shorter operating time</td>
<td>Lower postoperative pain</td>
</tr>
<tr>
<td>lower risk of vaginal cuff dehiscence</td>
<td>less analgesia requirement</td>
</tr>
<tr>
<td>lower risk of conversion to laparotomy</td>
<td>Less prolonged length of hospital stay</td>
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Lower cost
# Total laparoscopic hysterectomy versus abdominal hysterectomy:

<table>
<thead>
<tr>
<th>Abdominal hysterectomy</th>
<th>Total laparoscopic hysterectomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 minutes shorter operating time</td>
<td>Quicker return to normal activities → 15 days</td>
</tr>
<tr>
<td>lower risk of urinary tract (bladder or ureter) injuries</td>
<td>Reduction in wound or abdominal wall infection → 70%</td>
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<td>Less prolonged length of hospital stay → 1-3 days</td>
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FACTORS THAT INFLUENCE VAGINAL HYSTERECTOMY

- Uterus characteristics
- Accessibility of the uterus
- Extrauterine pathology
- Prior cesarean delivery
- Nulliparity
- Obesity
- Clinician and patient factors
Informed consent
Uterus characteristics

• upper limit of uterine size for vaginal hysterectomy ➔ 12-16 week size

• uterus shape is often more important than actual size in vaginal hysterectomy

• Uterine size reduction techniques:
  Wedge morcellation
  Uterine bisection
  Intra-myometrial coring.
Accessibility of the uterus

If the vaginal aperture is adequate to allow division of the uterosacral and cardinal ligaments, uterine mobility is often adequate to allow completion of vaginal hysterectomy, even if there is minimal uterine descent.
Disease outside the uterus, such as *adnexal pathology*, *obliterated cul-de-sac*, *endometriosis*, or *pelvic adhesions*, may prevent vaginal hysterectomy ➔ laparoscopy.
Prior cesarean delivery

• Not a contraindication to vaginal hysterectomy!!

BUT..

• Infection following the previous cesarean was an unfavorable prognostic factor → increased risk of dense adhesions between the bladder and cervix
Nulliparity & Obesity

• Not a contraindication to vaginal hysterectomy!!

• Laparoscopic hysterectomy is done if the vaginal route is not possible

• The risk of conversion to open surgery appears to be increased in proportion to the degree of obesity
Clinician and patient factors

- The surgeon's practice style and preferences influence the route of hysterectomy
Relative contraindications to vaginal hysterectomy
1- enlarged uterus
2- extra uterine disease (adnexal mass, pelvic endometriosis, severe pelvic adhesion)
Circumstances in which the laparoscopic approach can be helpful in:

- Documented endometriosis
- Chronic pelvic pain
- Known pelvic adhesive disease
- A concurrent benign adnexal mass that requires removal
- Patients with limited vaginal access
- A fixed immobile uterus
- Women who desire supracervical hysterectomy
Contraindications for laparoscopic hysterectomy

- Significant cardiopulmonary disease with intolerance to increased intraperitoneal pressure
- Suspicion of malignancy when morcellation would be required
Types of laparoscopic hysterectomy techniques

- Laparoscopic-assisted vaginal hysterectomy
- Laparoscopic hysterectomy with a vaginal cuff closure
- Total laparoscopic hysterectomy
- Single-port laparoscopic hysterectomy
  - more technically challenging to perform
  - no advantages over traditional laparoscopy
- Mini-laparoscopy (defined as port sites not exceeding 3 mm)
- Robot-assisted hysterectomy preferred in:
  - very obese patients
  - severe pelvic adhesive disease
Supracervical (subtotal) hysterectomy:

✓ No medical or surgical reason to retain the cervix if it can be easily removed

✓ The only absolute contraindication to supracervical (subtotal) hysterectomy → malignant or premalignant condition of the uterine corpus or cervix

✓ Disadvantages → continued need for cancer screening cyclic vaginal bleeding
COMPLICATIONS of Hysterectomy

• Hemorrhage – 2.4 percent
• Genitourinary disorders (eg, pelvic organ prolapse, urinary retention, renal or ureteral injury) – 1.9 percent
• Urinary tract infection – 1.6 percent
• Other infections – 1.6 percent
• Adnexal surgery at the time of hysterectomy does not significantly increase the prevalence of urinary tract injury

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<thead>
<tr>
<th></th>
<th>Ureter</th>
<th>Bladder</th>
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</thead>
<tbody>
<tr>
<td>Abdominal</td>
<td>2.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Vaginal</td>
<td>0.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Laparoscopic</td>
<td>3.1</td>
<td>7.3</td>
</tr>
<tr>
<td>Robot-assisted</td>
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<td>16.5</td>
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References