Scarless hysterectomy and minimally invasive gynecologic operations in Nopparat Rajathani Hospital: initial experience

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Abstract

Objective: To show that scarless hysterectomy is the best way of hysterectomy in the selected benign gynecologic patients who have not too big uterus, no severe adhesion or endometriosis. It has advantages of lower morbidity, faster recovery, lower cost and good cosmetic results.

Materials and Methods: A case series study was carried out in Nopparat Rajathani Hospital between April 2009 and April 2010 in 20 women without uterine prolapse who requested hysterectomy for various benign diseases of the uterus. Scarless hysterectomies were done by the technique adapted from Purohit Ram Krishna and Masaaki Andou. Successful operation, intra and post operative morbidity, post operative pain, re-admission and cosmetic result were observed.

Results: Scarless hysterectomy was succeeded in all 20 cases and bilateral salpingo-oophorectomy in 5 indicated cases. No intra-or post-operative morbidity, no re-admission, less postoperative pain, low cost and good cosmetic result were observed.

Conclusion: Scarless hysterectomy is a good alternative way for hysterectomy in the selected cases of benign diseases of the uterus. It needs some surgical skills but gives less morbidity, less pain, less cost and good cosmetic result.

Key words: Scarless hysterectomy, Natural orifice hysterectomy, Vaginal hysterectomy, non-prolapsed uterus, Minimally invasive gynecologic operations (MIGO)
Introduction

Minimally Invasive Gynecologic Operations (MIGO) started in Nopparat Rajathani Hospital (NRH) from 1995. MIGO comprised of 2 parts. The first part was hysterectomy that had 3 categories, as follow:

1. Vaginal Hysterectomy (VH) that had many synonym:
   - Natural orifice hysterectomy (NOH)
   - Scarless hysterectomy (SH)

2. Hysterectomy and Laparoscopy that had 3 subsets:
   - Total laparoscopic hysterectomy (TLH)
   - Laparoscopic hysterectomy (LH)
   - Laparoscopic assisted vaginal hysterectomy (LA VH)

3. Mini total abdominal hysterectomy (Mini TAH)

The second part of MIGO was adnexal surgery that was done by laparoscopy or mini-laparotomy (4-6 cm. skin incision length). Laparoscopic surgery and mini TAH will be reported in other papers.

VH or NOH or SH was done in the old days for prolapsed uterus only. Now, I started SH in non-prolapsed uterus with benign pathology cases. SH had more advantages for lower morbidity, faster recovery, and not required for special instruments as in laparoscopy. But SH was more complex in non-prolapsed uterus and had some absolute and relative contraindications.

Materials and Methods

A case series study was carried out between April, 2009 and April, 2010 on 20 women without uterine prolapse who required hysterectomy for different benign diseases of the uterus. There were 10 cases of leiomyoma, 3 cases of a denomyosis, 1 case of DUB, 3 cases of chronic pelvic pain, 1 case of CIN III, 2 cases of mental retardation. The demographic data were shown in Table 1.

The surgery techniques were adapted from Purohit Ram Krishna and Masaaki Andou. The principles of techniques were:

1. Hydrodissection of the plane of vaginal mucosa at the fornices of cervix by injection of NSS 20 ml. + 2 drops of 1 : 1000 adrenaline (in non-hypertensive patients)

2. Use of electrocautery for:
   - incision by monopolar (MP) 30 watt, pure cut.
   - coagulation by bipolar (BP) 45 watt, fine tip long legs.
   - tissue desiccation/coagulation by Liga-Sure (mostly), PK.

3. Bulge of uterine arteries were approached and secured extraperitoneally.

4. No sutures for any pedicles, except for lateral vaginal angles fixation (vault prolapse prevention) and stump closures by vicryl 2-0.

5. Conventional volume reduction maneuvers are used for large uterus.

Table 1 The demographic data

<table>
<thead>
<tr>
<th>Patients</th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. age (year)</td>
<td>43.2</td>
<td>15-74</td>
</tr>
<tr>
<td>2. parity</td>
<td>1.7</td>
<td>0-5 (P = 0, 4 cases)</td>
</tr>
<tr>
<td>3. previous cesarean section (no.)</td>
<td>0.5</td>
<td>0-3</td>
</tr>
<tr>
<td>4. previous other abdominal surgery (no.)</td>
<td>0.3</td>
<td>0-1</td>
</tr>
</tbody>
</table>
6. For an obstacle or poor visibility, I use a 10 mm telescope with light source to illuminate transvaginally and proceed further step of the operation.\textsuperscript{8,9}

**Results**

The operative data was shown in Table 2 as below.

**Table 2** The operative data

<table>
<thead>
<tr>
<th>Operative data</th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. operative time (min) for SH</td>
<td>88.5</td>
<td>60-120</td>
</tr>
<tr>
<td>2. operative time (min) for BSO</td>
<td>25</td>
<td>20-30</td>
</tr>
<tr>
<td>3. blood loss (ml.)</td>
<td>379.4</td>
<td>50-1,000</td>
</tr>
<tr>
<td>4. specimen weight (g.)</td>
<td>170.9</td>
<td>40-500</td>
</tr>
<tr>
<td>5. hospital stay (days)</td>
<td>2.3</td>
<td>2-3</td>
</tr>
</tbody>
</table>

Scarless hysterectomy was completed in all 20 cases. Vaginal salpingo-oophorectomy was completed in 5 indicated cases. All operation were succeeded without complications, including 4 nulliparous cases. The 2 teenagers (Down’s syndrome) needed additional small episiotomy to improve vaginal diameter. There was mild post-operative pain, same as D & C patients that needed only oral acetaminophen tablets. No post-operative hemorrhage, no vault hematoma, no febrile morbidity and no re-admission were observed. All patients were very satisfied for this operation.

**Discussion**

Hysterectomy and/or salpingo-oophorectomy are essential operations for many patients and gynecologists. There are four choices of hysterectomy:

1. TAH is the basic approach.
2. LAVH, LH, TLH need more laparoscopic surgery skills & more expensive instruments.
3. Mini TAH needs more surgical skills but less cost.
4. SH, VH, NOH, is the same principle as Mini TAH, but no scar seen on the abdomen.

I believe that SH is safe, effective and cheap operation for almost all cases of benign disease of the uterus without prolapse, including nulliparous cases. In the near future, I will operate the bigger size uterus.\textsuperscript{10,11} So, I think that many more TAH or TLH/LH/LAVH could be avoided by SH.

**References**


