ELSEVIER

JMIG The Journal of Minimally Invasive Gynecology

Original Article

Intraligamental Myomectomy Strategy Using Laparoscopy

Pei-Shen Huang, MD, Bor-Ching Sheu, MD, PhD, Su-Cheng Huang, MD, and Wen-Chun Chang, MD*

From the Department of Obstetrics and Gynecology, Buddhist Tzu-Chi General Hospital, Taipei Branch, Taipei, Taiwan (Drs. P.-S. Huang and S.-C. Huang), and Department of Obstetrics and Gynecology, National Taiwan University Hospital, School of Medicine, National Taiwan University, Taipei, Taiwan (Drs. Sheu and Chang).

ABSTRACT **Study Objective:** Intraligamental myomas (IMs) represent 6% to 10% of all uterine myomas. An IM growing from the lateral uterine wall into the broad ligament often presents as a large pelvic mass without symptoms. Removing a large IM can be difficult because of the limited operative field and poses challenges during conventional laparoscopic surgical approaches. The risk of injury to the ureter and uterine artery during myomectomy is greater than that during other types of myoma.

Design: Retrospective study (Canadian Task Force classification III).

Setting: University-affiliated hospital.

Patients: IM was classified into 3 types according to the location: (1) anterior intraligamental myoma (AIM), (2) posterior intraligamental myoma (PIM), and (3) lateral intraligamental myoma (LIM). From April 2007 to July 2015, 83 consecutive patients with IM underwent laparoscopic myomectomy at National Taiwan University Hospital, Taipei, Taiwan, including 23 AIM, 27 PIM, and 33 LIM.

Interventions: Several techniques are described, and videos are supplied for performing laparoscopic myomectomy safely and easily in different types of IM.

Measurements and Main Results: Urinary frequency (31%) and a palpable abdominal mass (31%) were the 2 most common presenting symptoms. Most of the lesions were 33 LIM (40%) followed by 27 PIM (32%) and 23 AIM (28%). The mean myoma sizes were 11.0, 8.0, and 7.8 cm; the mean myoma weights were 478, 279, and 309 g; the mean operative times were 134, 108, and 104 minutes; and the mean blood loss during surgery was 224, 94, and 107 mL for LIM, PIM, and AIM, respectively. LIMs had relatively more blood loss because they were heavier and commonly rested alongside the uterine artery. The only complication was late postoperative hemorrhage in 1 case of LIM. Histopathology showed leiomyoma in all cases. Three patients were spontaneously conceived after myomectomy, and each had a successful pregnancy and cesarean delivery.

Conclusion: Surgical treatment of IM is empirically difficult. It is important to use an approach that considers the location, size, and shape of the myoma. All types of IM presented with similar symptoms, and the highest blood loss occurred during laparoscopic myomectomy of a LIM. Journal of Minimally Invasive Gynecology (2016) ■, ■–■ © 2016 AAGL. All rights reserved.

Keywords: Classification; Huge myoma; Intraligamental myoma; Laparoscopic myomectomy

Intraligamental myoma (IM) accounts for 6% to 10% of uterine myomas [1]. IM grows from the lateral uterine wall into the broad ligament and occupies the pelvic potential spaces. IM often presents as an asymptomatic, large pelvic mass. These characteristics might be caused by the low physical resistance inherent in the pelvic potential spaces. A large IM is difficult to remove because of the limited operative field. The risk of injury to the ureter and uterine artery during myomectomy is greater than that associated with other types of myoma. Occlusion of feeding vessels becomes more difficult as the size of the myoma increases, and the approach should vary according to its size and shape.

Previously, we described useful surgical procedures for laparoscopic myomectomy (LM) [2–5]. With the advances in laparoscopic techniques, almost all uterine myomas in the uterine corpus can be treated by using LM. However, the treatment of IM via laparoscopic surgeries remains controversial. In this study, we investigated techniques for performing LM safely and effectively for different types of IM.

The authors declare that they have no conflicts of interest.
Supported in part by grants from the NSC104-2314-B-002-209.
Corresponding author: Wen-Chun Chang, MD, No 7, Chung-Shan S Rd, Taipei, Taiwan.
E-mail: p91421014@ntu.edu.tw

Submitted May 18, 2016. Accepted for publication June 8, 2016.
Available at www.sciencedirect.com and www.jmig.org

1553-4650/$ - see front matter © 2016 AAGL. All rights reserved.
http://dx.doi.org/10.1016/j.jmig.2016.06.007

ARTICLE IN PRESS

Materials and Methods

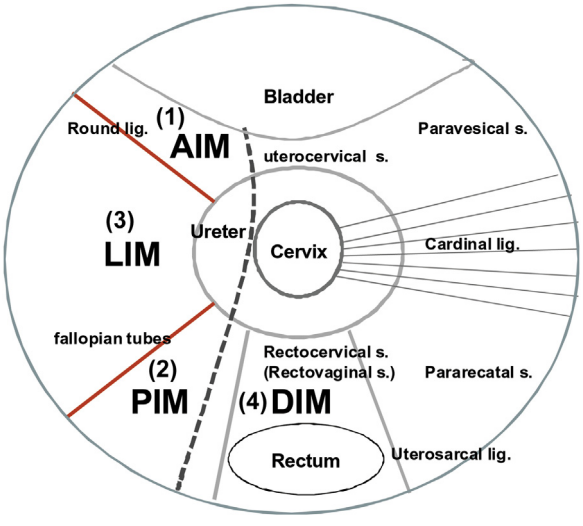
From April 2007 to July 2015, 83 patients with IM underwent LM at the National Taiwan University Hospital, Taipei, Taiwan. In this study, the patients were classified into 3 types according to the location of the myoma relative to the round ligament and fallopian tube (Fig. 1) as follows: (1) anterior IM (AIM), located anterior to the round ligament and bulging into the anterior leaf of the broad ligament; (2) posterior IM (PIM), located posterior to the fallopian tube and protruding into the posterior leaf of the broad ligament; and (3) lateral IM (LIM), located laterally to 1 side of the uterus between the round ligament and the fallopian tube. When the IM involved 2 sites, it was classified according to its most prominent location. For example, it was considered an AIM if a large part of the mass was located anteriorly and the remaining part of the mass was located laterally (with respect to the round ligament and fallopian tube). Myomas arising directly from the round ligament or from other broad ligament structures separate from the uterus were excluded from this study. Informed consent for the surgery and anesthesia was obtained from all the patients.

General Surgical Techniques for LM

Under endotracheal general anesthesia, the patient was placed in the lithotomy position. After skin disinfection, sterile draping, and Foley catheterization, a pneumoperitoneum was established by using the closed method. A 10-mm trocar for the laparoscope was inserted in the umbilicus, a 12-mm trocar in the left lower abdominal region, and a 5-mm trocar in the right lower abdominal region.

Fig. 1

Pelvic potential spaces and classifications of IM. (1) AIM: the myoma is located between the round ligaments and bulging into the anterior leaf of the broad ligament. (2) PIM: the myoma is located posterior to the fallopian tube and protruding into the posterior leaf of the broad ligament. (3) LIM: the myoma is located laterally to 1 side of the uterus between the round ligament and the fallopian tube. (4) DIM: a rare subtype of PIM located between the uterosacral ligaments and deeply seated in the pararectal and rectovaginal spaces.



Initially, we identified bilateral ovaries in order to exclude a diagnosis of a solid ovarian tumor and then defined the type of IM according to its position in the pelvic potential spaces, relative to the round ligaments and fallopian tubes (Fig. 1). An average of 30 mL vasopressin (20 IU/mL diluted in 50 mL saline) was injected in the serosa of the IM. A transverse incision was made on the serosa of the most protruding part of the IM. The myoma was then enucleated with the aid of a myoma screw. The operator had to be careful not to injure the adjacent ureter, bladder, or rectum and to continue dissecting and pulling the myoma out until the feeding vessels were clearly visualized and subsequently fulgurated by electrosurgery [2]. Most IMs do not require meticulous suture hemostasis, but for some IMs with thick stalks, we achieved hemostasis by using an interrupted 1-0 Vicryl suture (Polyglactin 910; Johnson & Johnson, Somerville, NJ). If continuous oozing from the rough surface occurred, uterine artery ligation was performed via retrograde umbilical ligament tracking [6]. The serosa and retroperitoneum were left open. Seprafilm (chemically modified hyaluronic acid and carboxymethylcellulose; Genzyme Corporation, Cambridge, MA) was used to cover the retroperitoneal defect and to prevent postoperative adhesions. In very large myomas, morcellation in situ was performed after partial enucleation because of the large size and immobility in the pelvis [2–4]. However, using a mechanical morcellator is presently an area of much controversy. Since the Food and Drug Administration discouraged the use of laparoscopic power morcellation, we have morcellated myomas with a scalpel at the extended 2.5-cm umbilical wound. Finally, a 7-mm closed wound vacuum drain was placed near the retroperitoneal defect to monitor postoperative bleeding.

Statistical Analyses

Herein nominal variables of data are expressed as numbers (percentage), whereas numeric variables are expressed as mean ± standard deviation (range) unless otherwise stated. All statistical analyses were performed with SPSS version 12.0 for Windows (SPSS, Inc, Chicago, IL).

Surgical Techniques for the 3 Types of IM

AIM

AIMs are located anterior to the round ligaments (Fig. 1) and may be buried deep into the paravesical space, protrude to the vesicocervical space, bulge into the anterior leaf of the broad ligament, and extend toward the bladder. A horizontal incision parallel to the bladder was made on the most

Download English Version:

https://daneshyari.com/en/article/3955867

Download Persian Version:

https://daneshyari.com/article/3955867

Daneshyari.com