

Is Intrafascial Laparoscopic Hysterectomy a Surgical Option?

Hysterectomia Laparoscópica Intrafascial: É uma Opção Cirúrgica?

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ABSTRACT

The search for less invasive and surgically satisfactory treatments is part of current practice. We present the results of a technical variation of laparoscopic hysterectomy (LH). First performed in the United States by Harry Reich in 1987, regularly performed since 2002, and described in the Brazilian literature by Namir Cavalli in 2003, (5) Intrafascial Laparoscopic Hysterectomy has the advantages of a lower incidence of complication, shorter hospitalization, less blood loss, and a reduction in surgical time. We also note the lower cost as compared to abdominal or vaginal approaches.(13,15) We used this technique in 320 cases between 2005 and 2009. The modification of the technique is in the intrafascial approach with a monopolar bisturi, thereby avoiding the risks of the other approaches, such as lesions of the bladder, intestine, vessels and especially of the ureters.(1,4,5,15) Another advantage of the method is its easy assimilation by those learning videolaparoscopic procedures.(11) We had a lower rate of complications (7.5%), faster discharges (at most 48 hours), and excellent acceptance by our patients.

Key words: Laparoscopic hysterectomy, laparoscopic surgery, minimally invasive hysterectomy.

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INTRODUCTION

Patients with benign uterine diseases that have indication for surgical procedures such as hysterectomy represent a large percentage of the indications for gynecological surgery. In 2003, 602,457 hysterectomies were performed in the United States, 538,722 for benign indications. Hysterectomy is the second most frequently performed surgery, after cesarean section (3,7,8,18), with an incidence of 4.8 surgeries/1000 women. The abdominal approach is the most commonly used: 66% versus 21.8% using a vaginal approach, and 11.8% laparoscopically (2003 data). Thus the laparoscopic approach is not replacing indications for the vaginal approach; rather it has supplanted the abdominal approach, with the numerous benefits(17), as discussed below. Since we began to perform this technique, we have noted the facility of its execution, savings in the surgical time such as the anchoring of the vaginal vault, and important advantages such as less blood loss, a quicker return to the patient's routine activities, a lower frequency of paralytic ileus, and the option of a vagi-

nal approach if defects of the pelvic floor are encountered (because the patient is already in the gynecologic position).(14) Since 1995 we have opted for the laparoscopic approach; thus in last 15 years – with the possibility of visualizing the ureters, and treating diseases of the uterine adnexa - we have attained great confidence as well as a high degree of patient satisfaction. Because the ligation of the uterine vessels is done laparoscopically, it satisfies the conditions for the procedure to be considered laparoscopic(15), even though the anatomic specimen is removed from the cavity vaginally and the suturing of the vault often carried out via this route. Nowadays, when abdominal hysterectomy is still the most frequently performed, it is worth emphasizing that minimally invasive procedures have become the more common.(4, 16)

PATIENTS AND METHODS

320 laparoscopic hysterectomies were performed from January 2005 through December 2009: 58 in 2005, 63 in 2006, 66 in 2007, 73 in 2008,

and 60 in 2009. All patients with an indication for hysterectomy seen by the authors either in their private practices or at the residents' service at the Teaching Hospital of the Federal University of Pelotas were included in this study. Patients with an indication for hysterectomy because of premalignant or malignant pathologies were excluded. There was no special preoperative preparation other than an eight-hour fast. Private patients typically arrived at the hospital on the morning of the procedure.

Technique: the patients received general anesthesia, and at induction received intravenously 100 mg of Ketoprofen and 2 grams of Cephalothin. Patients were placed in a lithotomy position with protective shoulder and lower extremity padding. After routine antisepsis and placement of sterile fields, a number 16 Foley catheter was introduced. Access for the Veres needle was made with a 10 mm umbilical incision, with the appropriate safety measures. The equipment for insufflation of the pneumoperitoneum was regulated for a maximum pressure of 15 mmHg. Upon completion of the pneumoperitoneum, an umbilical port was established with a 10 mm trocar. After placement of the optic and visualization of the cavity, two other auxiliary trocars – one 5 mm and the other 10 mm – were introduced in the region of the iliac fossas. At this point a uterine manipulator was placed; we used the Valtchev lifter. The utero-ovarian ligaments, tubes and round ligaments are clamped with a bipolar coagulation forceps; these structures are then cut. The large ligament is dissected by traction; the uterine vessels are identified, individualized, and coagulated with a bipolar forceps and cut. All of these procedures are performed bilaterally. Blunt dissection of the bladder is performed using a roll of gauze introduced through the 10 mm accessory port. Upon reaching the parametrium we seek to dissect the fascia with the monopolar instrument and make the procedure intrafascial, in this way trying to conserve the retinaculum that supports the vaginal vault in order to prevent future problems of the vault falling, and to make our dissection safer, as we are further from the ureter and bladder. With the vaginal vault open, the uterus is removed through the vagina (sometimes requiring fragmentation) and the closure is done through this approach with 0 chromic catgut sutures. In some cases we closed the vault through the laparoscopic route with internal sutures, in order to maintain the training of the team in this technique.

Inspection of the pelvic cavity followed by rigorous hemostasis is a critical step. The trocars are removed under direct vision and the portal orifices are sutured with 000 Mononylon. The patients remain at bedrest with venous access and a urinary catheter for eight hours after the procedure. Once the IV access and catheter are removed the patients are encouraged to ambulate. Most women are discharged on the same day of the procedure; the remainder within 24 hours of the procedure. No disposable material is used and only two surgical sutures (one chromic catgut and one mononylon) are consumed. This offers the possibility of reducing costs, relative to a vaginal hysterectomy, in which there is use of a greater variety of surgical sutures.(13)

RESULTS

The indications for surgery are listed in table 1. Table 2 presents the frequency distribution of cases according to decade of life. The surgery was most indicated in the fifth and six decades of life.

The results seems excellent when evaluated in terms of decreasing postoperative pain, the speed of returning to daily activities, and principally by the small number of complications (Table 3). Lacerations of the bladder were sutured laparoscopically intraoperatively with a urinary catheter maintained for a minimum of 10 days. The patients with operative wound infections, in the case of vaginal vault, were treated with antibiotic therapy on an outpatient basis. The total complication rate of 7.5% can be considered low. Mortality, which reaches rates in the literature of up to 0.2 % (8, 19), did not occur in this series of patients. The average weight of the uteri was 154.7grams, varying between 30 and 1206 grams. The mean surgical time was 68 minutes, varying between 32 and 170 minutes. There was no conversion in this series of patients. The longest hospital stay was 48 hours.

Table 1 - Indications.

Indication	Patients	%
Fibroids	215	67.1
Adenomyosis	31	9.6
Metrorrhagia	27	8.4
Pelvic pain/Dysmenorrhea	27	8.4
Hyperplasia/recurrent polyps	20	6.2

Table 2 - Age.

Age Range	Patients	%
20-29	6	1.8
30-39	46	14.3
40-49	180	56.2
50-59	58	18.1
60-69	12	3.8
70-79	4	1.2

Table 3 - Complications.

Complication	Cases	%
Infection of vaginal vault	12	3.7
Laceration of the bladder	4	1.2
Late hemorrhage of the dome	4	1.2
Wall Hematoma	2	0.6
Portal Bleeding	2	0.6

DISCUSSION

The **laparoscopic intrafascial hysterectomy** technique constitutes an excellent alternative for this procedure, as there is a consensus in the literature that in avoiding the abdominal approach we will have less post-operative pain, less trauma to the abdominal wall, and a quicker return to the routine activities. It is, therefore, a good alternative to abdominal hysterectomy when you want to have safe access to the adnexa, avoiding the risks of peritoneal adhesions and lesions of organs of the urinary tract, which in the extrafascial technique and in vaginal hysterectomy have a statistically significant increase.(4,6,15) With the patient already positioned for vaginal access, this technique facilitates the approach to pelvic floor defects. The training of gynecologists and the use of the laparoscope will gradually reduce the already low complication rate. The difficulty of this improvement in videosurgery procedures is, in our view, the limiting factor in the appropriate development of the various laparoscopic techniques for hysterectomy.

RESUMO

A busca por terapêuticas menos invasivas e cirurgicamente satisfatórias faz parte da atualidade, apresentamos os resultados de uma variante técnica da histerectomia por via laparoscópica (TLH). Executada pela primeira vez nos Estados Unidos em 1987, por Harry Reich, e sendo esta variante executada desde 2002, descrita no nosso meio por Namir Cavalli (5), como vantagem do método está o seu menor índice de complicações, menor tempo de hospitalização, menor perda sanguínea e redução do tempo cirúrgico, também salientamos o mais baixo custo em relação as vias abdominal ou vaginal (13, 15). Utilizamos esta variante técnica em 320 casos entre os anos 2005 e 2009, a modificação da técnica está na abordagem com o bisturi monopolar de maneira intrafascial, evitando portanto os riscos das outras abordagens, como lesões de bexiga, intestino, vasos e principalmente do ureter (1,4,5,15). Outra vantagem do método é sua fácil assimilação pelos aprendizes de procedimentos videolaparoscópicos (11). Obtivemos um baixo índice de complicações (7.5%), com alta precoce, em no máximo 48 hs, e excelente aceitação pelas pacientes.

Palavras-chave: Hysterectomy laparoscópica, cirurgia laparoscópica, hysterectomy minimamente invasiva.

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