การผ่าตัดมดลูกผ่านกล้องในผู้ป่วย 10 รายแรกของโรงพยาบาลศรีนครินทร์

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Laparoscopically Assisted Vaginal Hysterectomy : The Initial 10 Cases, Srinagarind Hospital Experience

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หลักการและเหตุผล: การผ่าตัดผ่านกล้องเป็นหัตถการที่กำลังได้รับความนิยมแพร่หลายมากขึ้น และทางโรงพยาบาลศรีนครินทร์ก็ได้มีการนำเอาหัตถการนี้มาให้บริการผ่าตัดมดลูกตั้งแต่เดือนกุมภาพันธ์ 2539

วัตถุประสงค์: เพื่อศึกษาผู้ป่วยที่ทำการผ่าตัดมดลูก ผ่านกล้อง 10 รายแรกที่โรงพยาบาลศรีนครินทร์ คณะแพทยศาสตร์ มหาวิทยาลัยขอนแก่น

รูปแบบการวิจัย: การศึกษาย้อนหลังเชิงพรรณนา

สถานที่วิจัย: ภาควิชาสูติศาสตร์และนรีเวชวิทยา โรงพยาบาลศรีนครินทร์ คณะแพทยศาสตร์ มหาวิทยาลัยขอนแก่น

กลุ่มตัวอย่าง: ผู้ป่วยที่ทำการผ่าตัดมดลูกผ่านกล้อง จำนวน 10 ราย ระหว่างเดือนกุมภาพันธ์ 2539 - กรกฎาคม 2539

การวัด: ระยะเวลาในการผ่าตัดมดลูกผ่านกล้อง เทคนิคในการผ่าตัด และภาวะแทรกซ้อนที่เกิดจากการผ่าตัด

ผลการวิจัย: ข้อบ่งชี้ในผู้ป่วย 8 ใน 10 ราย ของการผ่าตัดมดลูก คือ เนื้องอกมดลูก อีก 2 รายเป็นการเกิดซ้ำของภาวะเลือดออกผิดปกติจากโพรงมดลูก ระยะเวลาเฉลี่ยในการผ่าตัด 2 ชั่วโมง 27 นาที มีผู้ป่วย 1 รายที่เกิดภยันตรายที่กระเพาะปัสสาวะ และสามารถเย็บซ่อมผ่านกล้องได้

สรุป: การผ่าตัดมดลูกโดยผ่านกล้อง เป็นวิวัฒนาการใหม่ในการทำผ่าตัดทางนรีเวช ยังต้องหาประสบการณ์และศึกษาเพิ่มเติมเกี่ยวกับประสิทธิภาพต่อไป

Background: Laparoscopically surgery has become more and more popular during recent years. Srinagarind hospital has been offering laparoscopic hysterectomy since February 1996.

Objective: To study patient profiles in the initial 10 cases of laparoscopically assisted vaginal hysterectomy (LAVH) at Srinagarind Hospital

Study design: A retrospective descriptive study

Setting: Department of Obstetrics and Gynecology, Faculty of Medicine, Srinagarind Hospital, Khon Kaen University

Subjects: 10 cases with LAVH between February 1996 and July 1996

Main outcome measures: Operating times, techniques for LAVH and complications

Result: Indication for LAVH, 8 cases were myoma uteri, 2 cases were recurrent DUB. The average operating time was 2 hours 27 minutes per case. One case had torn dome of urinary bladder during surgery, repaired by laparoscopic suturing.

Conclusion: LAVH is a new technique for gynecologic surgery. It needs gynecologists with more training and requires further study to determine the effectivenees of the procedure

Key words: LAVH

ศรีนครินทร์เวชสาร 2540; 12(4), 212-216 • Srinagarind Med J 1997; 12(4), 212-216

Introduction

At present in medicine there is an explosion of interest in minimally invasive surgical procedures. In Gynecology it is now possible to perform adnexal removal[1-3], myomectomy[4], presacral neurectomy[5], pelvic lymphadenectomy6 and even hysterectomy with laparoscopic techniques[7-9]. The advantage of new techniques are shorter hospital stay[10], and recovery period, less post-op morbidity, reduced postoperative analgesia requirement[11] and earlier return to economic activity as well as improved cosmetic and low risk of adhesion formation.[12-14]

Srinagarind hospital, Khon Kaen University has offered these techniques to Northeast people since February 1996 including adhesiolysis, laparoscopic ovarian cystectomy, laparoscopic uterine nerve ablation (LUNA) and laparoscopically assisted vaginal hysterectomy (LAVH). This report reviews our experiencs with the inital 10 cases in of laparoscopically assisted vaginal hysterectomy.

Materials and Methods

Between February 1996 - July 1996, we performed 10 cases of laparascopically assisted vaginal hysterectomy at Srinagarind hospital, Khon Kaen University. The patient profiles are shown in **Table 1**, The most common indications for LAVH was myoma uteri, in 8 cases and 2 cases of recurrent dysfunctional uterine bleeding (DUB)

Techniques

After general endotracheal anesthesia, patient was placed in dorsolithotmy position, Foley catheter was retained and a uterine elevator inserted into uterine cavity. A transverse subumbilical incision 10 mm was carried out, using 2 towel clips to grasp and evert the base of the umbilicus, raising it from the abdominal structure then inserting the Verre needle at 45° from horizontal plane. After testing for the proper position of the Verre needle, 1.5-2 liters of CO_2 gas was insufflated. The Verre needle was removed and a primary trocar was inserted in this port in the same direction as the Veress needle. The trocar stylet was removed and laparoscope inserted. Two additional 5 mm incision were made at the lower quardant lateral to the inferior epigastric artery and accessory trocars were inserted under direct laparoscopic vision. The patient's position was changed to deep trendelenberg and pelvic organ explored. Both ureters were identified clearly before operative procedures. The round ligaments were descicated by bipolar electric cauterization and cut with monopolar scissors and then the anterior leaves of broad ligament separated by monopolar scissors. Infundibulopelvic ligaments or ovarian ligaments and fallopian tubes were divided by individual techniques eg. bipolar electric cauterization, automatic stapling device (Endo GIA) or tied with extracorporeal knot. Skeletonized uterine vessels and divided by individual techniques as above, then pushed vesicouterine fold downward to avoid bladder injury. The sponge forceps with few pieces of gauze were inserted into the anterior fornix in order to make it easier to identified the vaginal wall and anterior colpotomy was done by laparoscopic monopolar scissors. The rest of the operation were performed vaginally, the cervix was grasped by 2 tenaculums and pulled downward, incised around the cervix. Paracervical ligaments and uterosacral ligaments were clamped, cut and sutured ligation both sides, then the uterus was removed vaginally (only in one case where the patient had a 16 week size uterus, we used the morcellation technique). Suture of vaginal vault. We used laparoscope to check the bleeding point again. Suction irrigation was carried out. We removed accessory trocar sleeves under laparoscopic vision, then prinary trocar sleeves was finally removed. Suture of abdominal incisions with 2-0 chromic catgut.

Results

During 6 month experience of LAVH, the average operating time was 2 hours and 27 minutes per case, the first case took a great deal of time, 4.15 hours **(Table 1)**. As we gained experience the operating time was reduced. The average postoperative hospital stayed time was 5.2 days **(Table 2)**, but in case no 5, the hospital stay was 14 days because there was a tear of dome urinary bladder during the operation because of adhesion between bladder and lower part of uterus due to previous anterior coloporrhaphy and posterior colpoperineorrhaphy.

Table 1 Patient profiles

Patient number	Age (yrs)	Indication	Uterine size (weeks)	Operation	Techniques	Operating time (hours)
1	53	Myoma with	10	LAVH+BSO	Suture	4.15
		hypermenorrhea		Staples		
2	49	Myoma with	8	LAVH+BSO	Suture	3.00
		hypermenorrhea				
3	43	Myoma with pelvic pain	10	LAVH	Suture	2.15
				Staples		
4	42	Myoma	14	LAVH	Bi/Mono	2.50
5	46	Myoma with hypermenorhea	16	LAVH+BSO	Staples	2.30
				Laparoscopic	Suture	
				bladder suturing		
6	51	Myoma with hypermenorrhea	10	LAVH=BSO	Bi/Mono	2.30
7	36	Recurrent DUB	Normal	LAVH	Bi/Mono	2.15
8	46	Myoma with hypermenorrhea	10	LAVH+BSO	Bi/Mono	1.45
9	38	Myoma with right ovarian cyst	8	LAVH+Rt. SO	Bi/Mono	2.10
10	41	Recurrent DUB	Normal	LAVH	Bi/Mono	1.00

Bi = Bipolar electric cautery
Mono = Monopolar electric cautery
BSO = Bilateral salpingo-oophorectomy
SO = Salpingo-oophorectomy

Table 2 Laparoscopically assisted vaginal hysterectomy : clinical series

Study	Padial 1992	Mage 1992	Lee 1993	Davis 1993	Srinagarind 1996
No of cases	75	100	82	46	10
Uterine wts(g)	41-462(159)	(190)	-	84-474(191)	-
Techniques	Bi/Mono	Bipolar	Staples	Sature	Bi/Mono(6)*
	Staples				Staple
					Suture
Success rate	100%	95%	97%	87%	100%
Laparotomy	0%	5%	3%	13%	0%
Major complication	Bleeding	Bladder(5)	Bladder(2)	Ureter(1)	Bladder(1)
(cases)	(2)	Ureter(1)		Bowel(1)	
				Bleeding(2)	
Mean surgical	121	165	152	191	147(125)**
time (mins)					
Hospital	2.2	4.4	2.6	2.0	5.2
stay (days)					

* = number of patients used electric cautery technique
** = average operating times that used only electric cautery technique

Discussion

Laparoscopic surgery is a new technique in gynecologic operation which requires a well trained gynecologist and team. The first case of our experience in LAVH took more time compared to conventional laparotomy and vaginal hysterectomy but when the operating team gained experience the operating time was reduced. Uterine size determines operative difficulties, the smaller the lesser. We had a torn dome of bladder in one case (11.11%). In our opinion, electric cauterization seems to be a safe and appropiate technique for developing country due to the lower cost of instruments. Damiell JD, et al[15], reported his experience in using an automatic staple device to divided infundibulopelvic ligaments and uterine vessels which requires less time than bipolar electric cauterization but cost more.

Compared with Padial 1992[16], Mage 1992[17], Lee[18] and Davis 1993 [19] **(Table 2)** who used single and combined techniques for LAVH, we found no obvious difference in the success rate, or major complications but mean surgical times by electric cautery in our series was less than in Mage's study.

Follow up of the 10 patients after a 1 month period showed that everyone appreciated this new operative technique operation because of the small scar at the abdomen, shorter hospital stay and reduced analgesic requirement.

While the findings of this study suggest the potential advantages of LAVH, future studies will be required to determine the effectiveness of the procedure

Conclusion

We reported the initial 10 cases of LAVH in Srinagarind hospital experience. Electric cauterization technique was used in most of the cases. This technique seems to be of low cost and probably appropiate for our country.

References

1. Chaisilwattana P, Intrarphuvasak J, Chaoavaratana R. Handbook on pelviscopic surgery (basic & advanced knowledge). Department of Obstetrics and Gynecology, faculty of Medicine, Siriraj Hospital, Mahidol University, 1994: 11-57.
2. Daniell JF, Kurtz BR, Lee JY. Laparoscopic oophorec-tomy comparative study of ligatures, bipolar coagulation, and automatic stapling devices. Obstet Gynecol 1992; 80: 325-8.
3. Tintara H, Leetanaporn R. Cost benefit analysis of laparoscopic adnexectomy. Int J Gynecol Obstet 1995; 50: 21-5.
4. Nezhat C, Nezhat F, Silfen SL, Schaffer N, Evans D. Laparoscpic myomectomy. Int J Fertil 1991; 36: 275-80.
5. Perez JJ. Laparoscopic presacral neurectomy : result of the first 25 cases. J Reprod Med 1990; 35: 625-30.
6. Querleu d, Leblane E, Castelain B. Laparoscopic pelvic lymphadenectomy in the staging of early carcinoma of the cervix. Am J Obstet Gynecol 1991; 164: 579-81.
7. Reich H, Decaprio J, McGlynn F. Laparoscopic hysterectomy. J Gynecol Surg 1989; 5: 213-6.
8. Minelli L, Angiolillo M, Caione C, Palmara V. Laparoscopically assisted vaginal hysterectomy. Endoscopy 1991; 23: 64-6.
9. Liu CY. Laparoscopic hysterectomy. a review of 72 cases. J Reprod Med 1992; 37: 351-4.
10. Bost BW. Assessing the impact of introducing laparoscopically assisted vaginal hysterectomy into community-based gynecology practice. J Gynecol Surg 1995; 11: 71-8.
11. Murphy AA, Kettle LM, Nager CW, Torp VA, Wujek JJ, Chin HC. Operative laparoscopy versus laparotomy for the management of ectopic pregnancy : a prospective trial. Fertil Steril 1992; 57: 1180-5.
12. Operative Laparoscopy Study Group. Post operative adhesion development after operative laparoscopy : evaluation at early, second look procedures. Fertil Steril 1991; 55: 700-4.
13. Lundoff P, Hablin M, Kallfelt B, Thorburn J, Lindblom b. Adhesion formation after laparoscopic surgery in tubal pregnancy : a randomised trial versus laparotomy. Fertil steril 1991; 55: 911-5.
14. Luciano AA, Maier DB, Koch EI, Nulsen JC, Whitmen GF. A comparative study of postoperative adhesion following laser surgery by laparoscopy versus laparotomy in the rabbit model. Obstet Gynecol 1989; 74: 220-4.
15. Daniell JF, Kurtz BR, McTavish G, Gurley LD, Shearer RA, Chamber JF, et al. Laparoscopically assisted vaginal hysterectomy, the initial Nashville,

Tennessee, experience. J Repord Med 1993; 38: 537-42.
16. Padial JG, Scotolongo J, Casey MJ, Johnson C, Osborne NG. Laparoscopically assisted vaginal hysterectomy : report of 75 consecutive cases. J Gynecol Surg 1992; 8: 81-5.
17. Mage G, Wattiez A, Canis M, Pourly JL, Masson FN, Wenkel K, et al. Hysteroscopic per coelioscopique. Ref en Gynecologic Obstetrique 1993; 1; 126-35.
18. Lee CL, Soong YK. Laparoscopic hysterectomy with Endo GIA stapler. J Reprod Med 1993; 38: 582-6.
19. Davis GD, Wolgamott G, Moon J. Laparoscopically assisted vaginal hysterectomy as definite therapy for stage III and IV endometriosis. J Reprod Med 1993; 38: 577-81.