

Safe Laparoscopic Removal of a 3200 Gram Fibroid Uterus

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ABSTRACT

Background and Objectives: Hysterectomy using minimally invasive techniques yields fewer complications, less blood loss, and quicker recovery time compared with traditional abdominal hysterectomy. Despite these advantages, >65% of all hysterectomies in the United States are still performed using traditional laparotomy, and many clinicians still exclude patients with a history of prior abdominal surgery, significant obesity, or a large fibroid uterus from these procedures. Among physicians skilled in minimally invasive surgery, the prior largest uteri removed included a 2421g uterus removed vaginally, and a 2418g uterus removed via hand-assisted laparoscopic hysterectomy.

Methods: We performed a laparoscopic-assisted hysterectomy on a significantly obese 50-year-old woman with a 3200g uterus. The patient required a 2-day hospital stay and recovered unremarkably. The patient was able to return to work within one week and quickly returned to activities of daily life.

Conclusion: In the hands of experienced minimally invasive surgeons, laparotomy can be avoided in almost all instances of hysterectomy for benign disease.

Key Words: Laparoscopic hysterectomy, Fibroid uterus.

INTRODUCTION

Despite efforts to the contrary, every year in the United States about two-thirds of hysterectomies are performed via the traditional abdominal route.¹⁻³ Furthermore, well over 90% of hysterectomy specimens weigh <460 grams. We present a case involving laparoscopic removal of a 3200g (7 pound) uterus, not to suggest that all such cases be done in this manner, but rather, to suggest a reappraisal of the safe cut-off point for offering minimally invasive hysterectomy to patients. This reappraisal is conditioned on the recognized superiority of minimally invasive hysterectomy, whether vaginal⁴⁻⁸ or laparoscopic,^{4,7-11} over traditional total abdominal hysterectomy with faster recovery, less postoperative pain, improved cosmetic appearance, and similar complication rates.

Despite the numerous advantages of minimally invasive hysterectomy, transition to it remains slow in most regions of the United States. Barriers to this advancement include the requirement of advanced surgical skills, and limited training offered in most residency programs. In addition, there is little monetary incentive in the way of increased reimbursement despite the fact that these surgeries often require longer operating times and greater surgical skill than traditional "open" surgery requires. Some surgeons devoted to minimally invasive hysterectomy report a >95% success rate in attempted cases, resorting to laparotomy only rarely.¹² Other minimally invasive surgeons have attempted to push the limits of minimally invasive hysterectomy by removing large uteri without resorting to laparotomy. Among physicians skilled in minimally invasive surgery, the prior largest uteri removed included a 2421g uterus removed vaginally,¹³ and a 2418g uterus removed via hand-assisted laparoscopic hysterectomy.¹⁴ This present case report represents the removal of 3200g uterus via laparoscopic-assisted hysterectomy by surgeons skilled in minimally invasive techniques.

CASE REPORT

A 50-year-old, G4P4004, Hispanic female presented to our practice with the complaint of menorrhagia, secondary dysmenorrhea, and pelvic pain with a history of a large fibroid uterus first diagnosed by doctors in Mexico more than 3 years earlier. Since that time, the patient reported

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significant abdominal and pelvic pain interfering with all aspects of her life. Prior to seeing us, the patient had been seen by another gynecologist who had performed CT and had referred her to an interventional radiologist who declined to offer her embolization.

The patient's past medical history was remarkable for hypertension controlled on 2 medications, and type II diabetes, also controlled on oral medications. Her past surgical history was remarkable only for a laparoscopic tubal ligation following her last pregnancy 20 years earlier.

Physical examination revealed a pelvic-abdominal mass felt to be the uterus extending well cephalad of the umbilicus and clearly evident by inspection with the patient lying supine. Her pap test was benign. Ultrasound was performed both abdominally and vaginally, and a large fibroid uterus was diagnosed. Multiple myomas were visualized, some with a heterogeneous echo texture.

The patient was taken for a D&C and hysteroscopy to assure a benign endometrium. Endometrial curettage was sent to pathology and was found to be benign.

After extensive informed consent, the patient was taken for total laparoscopic hysterectomy. The technique used involved placement of 11-mm ports approximately 10cm cephalad to the umbilicus, to properly visualize the uterus and associated adnexa. Immediately visualized was an ectopic blood supply to a large pedunculated fibroid coming off of the uterine fundus. This artery was approximately 1 and ½ cm in diameter, (approximately the size of the common iliac) and appeared to be coming off the inferior mesentery. This artery was carefully divided by using 10-mm LigaSure V (Valleylab, Boulder, CO). Attention was then turned to the pedunculated fibroid, which was also removed with the bipolar cautery device. With the pedunculated myoma out of the way, evaluation of the pelvic side walls was possible, and the course of both ureters was clearly identified. Further dissection involved traditional division of the uterine adnexa and ligaments with the bipolar down to the level of the uterosacral ligaments. At this point, it was decided to perform transection of the cervix as in a supracervical hysterectomy, to permit displacement of the bulky masses first, then to return and complete removal of the cervix with appropriate exposure to identify ureters and pelvic vessels. After the cervix was removed, our technique of "extended laparoscopic hysterectomy" was used with simultaneous morcellation (Gynecare Morcellator, Ethicon EndoSurgery, Cincinnati, OH) and removal of remaining tissue both laparoscopically and vaginally to limit operating time.

After all fragments were removed and the pelvis irrigated, the cuff was closed vaginally affixing it laterally to the uterosacral ligament pedicles. Laparoscopic ports were closed with the Carter-Thomason closure device (Cooper Surgical, Trumbull, CT). There were no complications, operating time was approximately 6 hours, and the patient left the hospital on postoperative day 2 in good condition. Pathology analysis revealed a 3200g myomatous uterus with areas of hyaline degeneration and benign, proliferative endometrium.

DISCUSSION

In our practice, we attempt all cases of hysterectomy for benign disease via minimally invasive approaches, and make the decision to convert to an open or "traditional" abdominal approach only upon deciding that the minimally invasive approach would be unfeasible intraoperatively. Adopting the mindset of recognizing the clear patient benefits of minimally invasive hysterectomy over traditional abdominal hysterectomy will give a higher percentage of women requiring hysterectomy the opportunity to enjoy the benefits of minimally invasive surgery. Because the vast majority of hysterectomy specimens weigh <460g, concerted attempts to offer minimally invasive surgery will meet with success in the majority of patients and lower the abdominal hysterectomy rate.

CONCLUSIONS

Surgeons should develop a cut-off above which they will refer to a skilled minimally invasive surgeon or pursue abdominal hysterectomy themselves. Our opinion is that in the presence of sufficient assistance and guidance, laparotomy can be avoided in almost all instances of hysterectomy for benign disease.

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