

Laparoscopic Removal of Large Multiple Myomas with Cumulative Weight of 2.3 kg

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Abstract

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Large multiple myomas with a cumulative weight of 2.3 kg were removed laparoscopically from a nulliparous 32-year-old woman. The patient's recovery was uneventful, and she has been eumenorrhic in the 2 years since surgery.

Case Report

A 32-year-old nulliparous woman was referred to our center with a mass and dull pain in the abdomen for 1 year. She had menorrhagia, with bleeding for 6 to 7 days every month, soaking 6 to 7 pads/day. The woman was anemic (hemoglobin 10 g/dl).

Abdominal and pelvic examinations revealed an immobile, irregular, firm abdominal mass arising from the uterus (34 wks size on bimanual examination) predominantly on the right side. It occupied the entire lower and middle quadrants of the abdomen and extended to the right costal margin (Figure 1).

Ultrasound examination showed three large myomas, a fundal lesion measuring 15.7 × 12.2 × 8.6 cm, one on the right lateral wall measuring 7.3 × 4 cm, and one on the posterior wall measuring 10.8 × 8.8 cm. Ovaries were normal.

Four other gynecologic centers the patient had visited had suggested open abdominal hysterectomy. She was keen to preserve her uterus and preferred to undergo laparoscopic myomectomy.

Preoperative blood transfusion was given to raise the patient's hemoglobin to 11 g/dl. Prophylactic measures were employed to prevent thromboembolism (antiembolic stockings, subcutaneous injection of low-molecular-weight heparin). The woman was given a strict liquid diet for 2 days before surgery to ensure that her bowel loops were empty.

Operative Procedure

With the patient in supine position and catheterized, the Veress needle was inserted at Palmer's point. The abdomen was insufflated with carbon dioxide at a preset pressure of 20 mm Hg. The 10-mm 30-degree foreoblique telescope was placed at the Palmer's point. Four 5-mm accessory ports were introduced, one each in the left and right lateral lumbar regions at the level of the umbilicus; a third in the left lateral lumbar region below the port inserted earlier, and the fourth in midline about 3 cm below the umbilicus.

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Survey of the abdomen showed four large myomas and one smaller anterolateral one. A large fundal pedunculated myoma extended to the liver (Figure 2). Another large myoma was present on the left posterolateral wall of the uterus; it could not be seen in its entirety initially as the fundal myoma made anteversion of the uterus difficult (Figure 3). Two myomas were visualized on the anterior wall of the uterus, a large one on the anterior wall and a slightly smaller one on the right anterolateral wall (Figure 4). All lesions seemed to conform to dimensions noted on ultrasound.

Because it was difficult to manipulate the uterus with the uterine manipulator, a 5-mm myoma screw was placed in the uterine fundus for traction. The fundal myoma was maneuvered to offer better access to its base, and vasopressin 5 U in 100 ml saline was injected all along the base anteriorly. The myoma was progressively separated from the uterus with bipolar desiccation and cutting with scissors along the base. The myoma screw was repeatedly repositioned and firm traction was placed on it, which aided desiccation and cutting of the lesion at its base. Significant bleeders were coagulated with bipolar forceps and hemostasis was ensured.

The tongue-shaped extension of the posterior myoma into the pouch of Douglas could be seen only after the fundal myoma was separated and the uterus could be anteverted. After infiltrating up to 30 ml of vasopressin subcapsularly, a longitudinal incision was made on the capsule with bipolar coagulation and scissors until the tumor's pearly white appearance was seen. The myoma was progressively enucleated by traction with a myoma drill and countertraction with a suction-irrigator.

The two enucleated myomas were removed with the help of the 15-mm morcellator. The left lateral lower 5-mm port was converted to a 15-mm port through which the morcellator was introduced. The anterior wall myomas were enucleated similarly and morcellated. A horizontal incision was made on both the myomas, taking care to



FIGURE 1. Abdominal mass measures up to 34 weeks' gestation on bimanual examination.

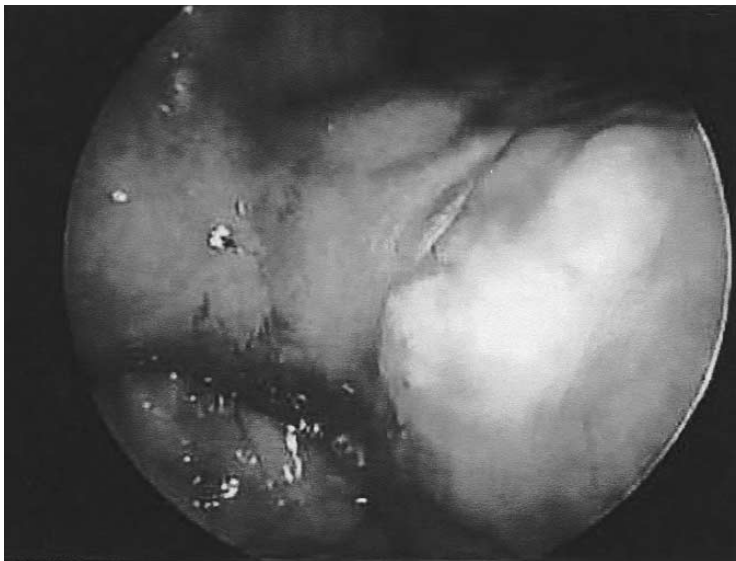


FIGURE 2. Fundal pedunculated myoma.

prevent extension into the cornual region and damage to fallopian tubes.

Adequate hemostasis of the myoma beds was ensured. The uterine wall, which was opened at four sites for removing myomas, was closed with intracorporeal sutures in two layers with figure-of-eight sutures with number 1 polyglactin. The basic aim of suturing was to approximate the uterine walls without tension and to leave behind no dead space. We did not suture endometrium, and closed myometrium ensuring that endometrial edges were approximated.

At the end of the procedure, about 500 ml of saline was left in the cavity so that sutured areas remained submerged

in it. The 15-mm port was closed with a port closure needle using 1-0 polyglactin.

The total weight of the myomas was 2.3 kg. Blood loss was about 1500 ml. Operating time was 280 minutes, of which 150 minutes were devoted to morcellation.

Postoperative Course

The patient withstood the procedure well. She was given 2 U of blood postoperatively, 1 on the first and 1 on the second postoperative day. Her hemoglobin had dropped to 9 g/dl on the second postoperative day and rose to 11 g/dl after transfusions. She was discharged on the third postoperative day. Her recovery was uneventful.

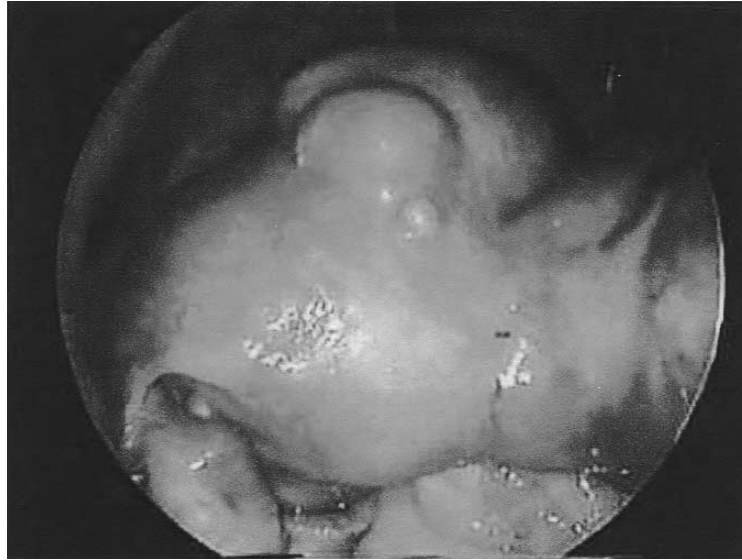


FIGURE 3. Fundal and anterior wall myomas.

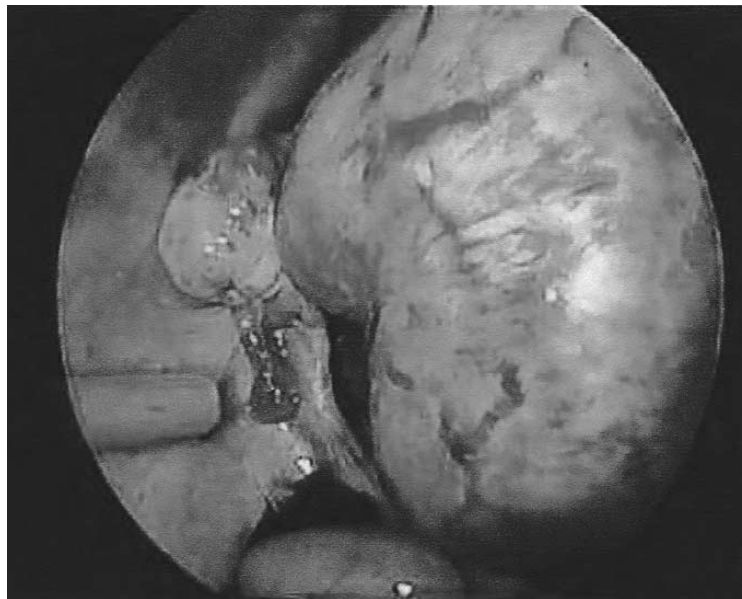


FIGURE 4. Posterior wall myoma could be seen after removal of the fundal myoma.

She has had no complaints in the 2 years since the procedure. She is eumennorheic and has mild discomfort during her periods. There has been no recurrence of the myomas.

Discussion

Opinions vary regarding the feasibility and outcome of laparoscopic myomectomy, especially for large myomas. Various experts have laid down limits on the sizes and numbers of myomas beyond which laparoscopic removal is contraindicated.^{1,2}

The most common indication for laparoscopic myomectomy is the patient's desire to avoid hysterectomy.³ For these women, the decision to perform myomectomy by laparotomy rather than laparoscopy may be largely based on the surgeon's expertise.³

The move in recent years has been toward conservative management of gynecologic problems. In a young nulliparous woman with myomas, regardless of their size, site, and number, laparoscopic myomectomy is the ideal procedure. It not only conserves the uterus, but has inherent benefits over laparotomy that are invaluable in a nulliparous woman. Technical problems encountered at

laparoscopic myomectomy relate to hemostasis, uterine closure, and tissue removal. In skilled hands aided by a trained supporting team, these problems are surmountable. Mastery of intracorporeal suturing ensures that the procedure duplicates time-tested techniques of open myomectomy and reduces the frequency of uterine wound dehiscence. Technical advances such as electromechanical morcellation devices ensure that myomas can be removed efficiently.

One prime concern of any operative procedure in a nulliparous woman is preservation of tubo-ovarian anatomy with as few postoperative adhesions as possible. Limited data suggest that adhesion formation after laparoscopic myomectomy is less common than after laparotomy and is related to the number and size of tumors removed, as well as closure of the myometrial defect.⁴ Reduced tissue handling and drying, which are inherent in laparoscopy, may contribute to reduced adhesion formation.⁵⁻⁷

In conclusion, it is possible to remove very large multiple myomas by the laparoscopic route. In nulliparous women, it may offer advantages over laparotomy that cannot be overlooked.

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