

Uterine giant myomectomy: A case report

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Abstract

Background Uterine leiomyomas, the most common benign gynecological tumor, usually occur in females of reproductive age. Myomectomy is the preferred surgical treatment in reproductive-aged women who want to retain their uterus. Myomas can range in size from as small as an apple seed to as large as a melon. Giant uterine leiomyomas are very rare.

Methods We present a case report of a 3.6-kg giant myoma detected in a 39-year-old nulliparous single woman desirous of future fertility.

Results The patient underwent myomectomy and was diagnosed with leiomyoma with degeneration. This case confirms the efficiency, reliability, and safety of a minimally invasive surgical approach for removing a giant uterine myoma

Conclusion Uterine leiomyoma can be considered for traditional abdominal myomectomy in patients with large myomas. Myomectomy is the preferred procedure for adolescent patients, in view of preserving fertility.

Introduction

Uterine leiomyomas, the most common uterine neoplasm of the female reproductive tract, contain variable percentages of fibrous tissue. They are found in 20%–30% of women of reproductive age, between 25–50 years, and are associated with low parity (1, 2). The prevalence of uterine myomas decreases after menopause (3, 4). The size of leiomyomas varies from small to giant (6.5 kg to 11.4 kg or more) (5, 6). Leiomyomas are often asymptomatic, but large tumors can cause abnormal bleeding, pelvic discomfort, dysmenorrhea, and infertility. Clinical examinations such as ultrasonography (USG), computed tomography (CT) scanning, and magnetic resonance imaging (MRI) are often helpful in defining the numbers, location, and size of myomas (7, 8). For infertile women or women who want to retain their uterus, conservative surgical intervention in the form of myomectomy, either laparoscopically or through open surgery, is offered (7).

Case Report(s)

A 39-year-old unmarried woman was referred to our gynecology department with abdominal distension associated with progressive abdominal discomfort. Her menstrual period was irregular, and she had severe dysmenorrhea and menorrhagia, using 10 pads per day. She had no family history of leiomyoma, and she had never used oral contraceptive pills.

Laboratory analysis showed a blood hemoglobin concentration of 12.6 g/dL. The remainder of her laboratory test results, including levels of serum electrolytes, serum amylase, and tests of liver and renal function, were normal, and pregnancy was excluded.

Both transabdominal and transvaginal USG examination revealed globular uterus enlargement and a hypoechoic mass measuring 14 × 12 cm (Fig. 1). A contrast-enhanced CT scan of the abdomen and pelvis showed a large unilocular cyst of 15 × 10 cm in the central portion of the pelvis, with a small amount of ascites (Fig. 2). The patient underwent MRI examination of the pelvis, which showed an enlarged, posteriorly inclined uterus (Fig. 3).

Based on these findings, a massive uterine myoma was assumed, and myomectomy was selected as the treatment. The uterine artery was ligated after opening the abdominal cavity, and the largest leiomyoma was removed under a reduced blood flow. The removed mass measured 32 × 23 × 14 cm and weighed 3.680 kg (Fig. 4). Histopathological examination confirmed the huge mass as a leiomyoma with degenerative changes. The patient was instructed to undergo follow-up pelvic USG at 6-month intervals. One month after surgery, sonographic findings were normal.

Discussion

Uterine leiomyomas are benign tumors that arise from the smooth muscle cells of the myometrium and represent hormonal interactions. These tumors are found in approximately one-third of women over the age of 35 years, but they can also occur in young women under 20 years of age. Both estrogen and progesterone play important roles in the development of these leiomyomas (1). These tumors are usually

benign and estrogen dependent; thus, exogenous estrogen, obesity, and pregnancy may also influence their growth (1, 5). Pregnancy and obesity were excluded in our patient, and no family history was reported. These fibroids can cause irregular menstruation, pelvic pain, and pressure symptoms on surrounding organs. Particularly large leiomyomas may compress the adjacent organs such as the bladder or rectum (9). The largest uterine leiomyoma reported in the medical literature weighed 63.3 kg and was removed post-mortem in 1888 (10). Clinical symptoms of large myomas may include abdominal pain, constipation, pelvic and leg pain, and menstrual problems (8). The recent study reported that successfully removed 18 cm of myoma (11). A similar study conducted by F. Savulescu represented the 33cm giant uterine mass and other medical literature showed that 24cm myoma removed respectively (7, 12).

If a leiomyoma is suspected, USG should initially be used because it is the least invasive, most widely available, and most cost-effective tool. CT scan is also a useful tool for diagnosis, but leiomyomas are indistinguishable from healthy myometrium unless they are calcified or exhibit necrotic complications and malignant transformation (13). MRI represents the gold standard for the evaluation of soft tissue tumors, as it can define the anatomy of the uterus and ovaries and reveal the location and number of leiomyomas. However, the limited availability and high cost of MRI are serious limitations (14).

The treatment algorithm options available to women with uterine fibroids should ideally achieve the following: relieve signs and symptoms, significantly reduce the fibroid size, preserve fertility where still desired, improve quality of life, and be convenient for the patient (15). The management of uterine leiomyomas can be conservative, medical or surgical. If myomas are small and asymptomatic or well controlled in hormone therapy then observation can be enough. Surgical treatments such as hysterectomy, myolysis, or myomectomy can be employed when appropriate, and the chosen approach should be individualized to each patient. The authors studied that uterine leiomyoma is safe alternative to laparotomy for very large myoma. In our case, the maximum diameter of the myoma was 20cm and patient was nulliparous, single, and desirous of fertility; hence, she requested myomectomy, and we preferred midline transverse abdominal incision. Myomectomy can be performed abdominally, laparoscopically, or vaginally depending on the number, size, and location of the fibroids (16). Nowadays, operators most frequently preferred

surgical management for the women with large myomas. Hysterectomy is often performed for women with symptomatic leiomyomas and who do not desire to maintain their fertility (17).

Differential diagnoses of uterine leiomyomas should also include uterine leiomyosarcomas, pelvic tumors such as sarcoma botryoides, and müllerian adenocarcinomas, which present as pelvic masses in adolescents (1).

Conclusion

This case confirms the efficiency, reliability, and safety of a minimally invasive surgical approach for removing a giant uterine myoma. Therefore, uterine leiomyoma can be considered for traditional abdominal myomectomy in patients with large myomas. Myomectomy is the preferred procedure for adolescent patients, in view of preserving fertility.

Abbreviations(s)

USG: Ultrasonography

CT: Computed Tomography

MRI: Magnetic Resonance Imaging

Authors contribution(s)

Temuulee Enkhbold: Conception and design, Interpretation of data, Drafting the article

Seung-Hee Lee: Conception and design, Interpretation of data, Revising article

Yoo-Jin Park: Conception and design, Revising article

Tae-Hee Kim: Conception and design, Final approval of the version to be published.

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