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Comprehensive management of a massively enlarged uterus resulting from multiple large fibroids: A case report

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Abstract

This case report describes a 38-year-old female patient who presented with dysmenorrhea and for a prepregnancy check-up, revealing a massively enlarged uterus due to multiple large fibroids. Despite a history of fibroid diagnosis following a caesarean section in 2015, the patient had not undergone follow-up care. Examination and imaging, including ultrasound and MRI, identified several large fibroids, the largest measuring 16.1 cm. Surgical management involved a laparotomy and myomectomy, successfully removing seven fibroids with a specimen weight of 2.242 kg. Postoperative recovery was uneventful, and histopathology confirmed fibroid uterus without atypia. This case underscores the necessity of regular gynecological follow-ups for early detection and management of fibroids to avoid severe complications and highlights the effective use of diluted vasopressin in reducing intraoperative blood loss.

Keywords: Uterine fibroids, myomectomy, laparotomy, gynecological follow-up, diluted vasopressin, case report, dysmenorrhea, pre-pregnancy evaluation

Introduction

Leiomyomas, often known as fibroids, are the predominant noncancerous growths in the pelvic region of females. They arise from the clonal expansion of smooth muscle cells in the uterus. Tumors of this kind are present in about 50% of women who are 35 years old or older, and their occurrence is more common during the reproductive period as a result of hormone-induced growth ^[1]. At the age of 50, over 80% of African women and nearly seventy percent of Caucasian women have fibroids ^[2]. The exact cause of the formation of these tumors is still unknown. However, various risk factors have been identified, including a favorable family history, genetic changes, and lifestyle variables such as smoking, obesity, dyslipidemia, diet, exercise, and medical contraception. Vitamin D supplementation, statin usage, and dietary modification have been shown to be protective against these lifestyle-associated risk factors, coupled with parity ^[1, 3]. Myomas may manifest as either a solitary lesion or many lesions, as seen in about two-thirds of cases. These lesions can range in size from microscopic to macroscopic proportions ^[1, 4]. Given that most women with myomas do not have symptoms ^[2], there is a high prevalence of undetected uterine fibroids. Fibroids may impair fertility ^[5] and have a significant psychological influence on a woman's well-being ^[3]. As myomas continue to develop, they might lead to symptoms caused by compression, such as difficulty breathing, frequent urination, or problems with bowel movements. The growth rate of myomas varies between and across individuals, either regressing or steadily expanding progressively until the climacteric phase is possible ^[1]. Close and meticulous ultrasound exams are necessary to identify fast developing and enlarging fibroids. Severely large myomas may lead to significant consequences, such as respiratory failure caused by compression of the diaphragm^[6], or a hernia in the abdominal wall that becomes trapped^[7]. While diagnosing a huge myoma might be challenging due to several potential differential diagnoses, the majority of uterine myomas are accurately detected during normal (pre-) clinical examinations ^[1]. In this report, we highlight an uncommon occurrence. This case report details the presentation, evaluation, and management of a 38-year-old female patient who presented to the Gynecology Clinic on April 11, 2024, with complaints of dysmenorrhea and for a pre-pregnancy check-up.

The patient had a significant history of a previous caesarean section and was diagnosed with a fibroid uterus in September 2015 but did not pursue follow-up care.

History of presenting illness

The patient, para 1 live 1, had not sought medical attention since her caesarean section in 2015 when she was initially diagnosed with uterine fibroids. She reported pain during menstruation and sought evaluation for pre-pregnancy planning.

Initial Assessment

On physical examination, the patient's uterus was palpated and found to be enlarged to a size comparable to a 32-week pregnancy. Multiple large fibroids were suspected. The patient, with a BMI of 37.13 kg/m^2 (weight: 90.35 kg, height: 156 cm), attributed her abdominal enlargement to adiposity and was surprised by the fibroid diagnosis.



Fig 1: MRI showing multiple large fibroids and loculated fluid collection on the left side

Investigations and Final Diagnosis

A transabdominal ultrasound revealed an extensively enlarged uterus reaching the supraumbilical level, with multiple fibroids obscuring detailed visualization. An MRI of the pelvis with contrast was performed for further mapping, revealing:

- Multiple large fibroids measuring 12.8 x 11.3 x 16.1 cm, 9.8 x 8.4 x 10 cm, and 10.8 x 6.4 x 7 cm.
- Several smaller fibroids and dilated lymphatic channels due to pressure effects.

Laboratory investigations showed a borderline high LDH level of 258 U/L and a preoperative hemoglobin level of 13.9 g/dL.

Surgical management

Given the massively enlarged uterus, the patient was advised and consented to undergo a laparotomy and myomectomy. On May 6, 2024, she underwent surgery under general anesthesia with a vertical midline infraumbilical incision. Intraoperative findings included:

- Uterus enlarged to a 32-week size with multiple large fibroids.
- Removal of seven fibroids: the largest fundal intramural fibroid measuring 16 x 10 cm, other subserosal fibroids measuring 10 x 6 cm and 6 x 5 cm from the anterior wall, and four small fibroids.
- Adhesions between the bladder and uterus.
- Normal bilateral fallopian tubes and ovaries.
- Loculated fluid collection in the left broad ligament, likely due to pressure effects, which was drained.

The total specimen weight was 2.242 kg. Postoperative hemoglobin was 12.4 g/dL. The surgery and recovery were uneventful, with no requirement for blood transfusion and an estimated blood loss of 800 ml.



Fig 2: Intra operative findings & Post-operative uterus showing fund posterior aspect and also showing anterior aspect



Fig 3: Specimen weighing 2.242 kg sent for histopathology

Histopathology

Histopathological examination confirmed the diagnosis of a fibroid uterus without any atypia.

Uterine fibroids have the ability to develop to a very large size before causing disability or noticeable symptoms. The size limit is determined by the host's capacity to support it. This is due to the relatively spacious size of the abdominal cavity, the ability of the front abdominal wall to expand, and the gradual pace at which this tumor grows ^[8]. Consequently, these individuals may exhibit a physical state that differs from that of a normal lady with fibroids, resembling instead an older patient with several comorbidities ^[9]. Nevertheless, the large tumors often result in irregular menstrual cycles, discomfort in the pelvic area, and exert pressure on the lungs, urinary bladder, ureters, and other organs, which may lead to further difficulties such as blood clot formation in the lower limbs, as well as kidney and lung failure.

Conclusion

This case underscores the importance of regular gynecological check-ups, particularly for patients with a known diagnosis of uterine fibroids. Early detection and management might have allowed for less invasive laparoscopic procedures. The intraoperative use of diluted vasopressin was instrumental in minimizing blood loss during surgery. This case also highlights the necessity for patients to be vigilant and seek timely medical consultation to avoid complications associated with large fibroids. Regular follow-up and early intervention can significantly improve outcomes and reduce surgical morbidity.

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