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Case Report

Cervical Leiomyoma in Pre-Menopausal Woman

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Abstract

Background: The most common pelvic tumors in women of reproductive age are uterine fibroids or known as leiomyomas, the frequency of cervical leiomyomas is about 1 to 2%. Leiomyoma which causes symptoms requires surgery, myomectomy or hysterectomy, but the most frequent is hysterectomy. Nevertheless, the management of cervical leiomyomas in general include the premenopausal women remains a challenge in order to preserve the uterus whereas future pregnancy is still possible. Therefore, a hysterectomy is not the preferred procedure. We present a case of a 47-year-old, multiparous woman with cervical leiomyoma that was treated with myomectomy and curettage to give an overview how to treat cervical leiomyoma in patients who want to preserve their fertility.

Case Presentation: A 47-year-old woman, P3A0, presented to the emergency department at Sultan Agung Islamic Hospital with a mass spontaneously protruding from the vagina a few hours before admission, lower abdominal pain and heavy vaginal bleeding. The gynecological examination revealed a mass with a reddish surface and blood protruding out of the introitus. The size of mass was 20 cm x 8 cm x 12 cm. The mass is mobile, painful, tender on palpation, and seemed to be originating from the cervix. Myomectomy and curettage were performed. The histopathology result was suggestive of benign leiomyoma.

Conclusion: This was a case of symptomatic cervical leiomyoma who was effectively treated with myomectomy and curettage. Myomectomy is considered the most frequent therapy for symptomatic myomas for women who desire to preserve their fertility.

Keywords: *Cervical Leiomyoma, Fibroids, Pre-Menopausal, Myomectomy*
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INTRODUCTION

The most common pelvic tumors in females of reproductive age are uterine fibroids or commonly known as leiomyomas, affecting 20-30% of women between the ages of 30 and 50, while the frequency of cervical leiomyomas is only 1% to 2%.[1,2] Leiomyomas arise from the uterine smooth muscle with a low mitotic index representing the majority of leiomyomas.[3] Numerous risk factors, such as nulliparity, obesity, and early menarche, are linked to the development of fibroids, with higher exposure to sex hormones, mainly estrogen.[4] Unopposed estrogenic stimulation causes endometrial hyperplasia or proliferation as well as secondary changes in leiomyomas.[5] Progesterone and estrogen promote leiomyoma growth through cytokines and growth factors, while estrogen stimulates leiomyoma cell proliferation through paracrine pathways. Due to the increased blood flow to the uterus and the increased level of steroid hormones, the size of leiomyoma might continue to increase.[6,7]

Cervical fibroids are divided into anterior, posterior, lateral, and central categories based on where they are located. They can also be divided into interstitial, subserosal, and submucosal polypoid types.

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There is a small chance that uterine leiomyomas will develop malignantly into sarcomas. Malignant degeneration has been calculated to occur in just 0.2% of cases, which is less than the 1.0% incidence rate.[8]

Leiomyoma which causes symptoms and reduces the quality of life requires surgery, myomectomy or hysterectomy. The most frequent surgical procedure used to treat this condition is hysterectomy or removal of the uterus.[9] Nevertheless, the management of cervical leiomyomas in premenopausal women remains a challenge in order to preserving the uterus whereas future pregnancy is still possible. Therefore, hysterectomy is not the preferred procedure. This case report is intended to deliver an overview of how to treat cervical leiomyoma in patients who still have menstrual periods and want to preserve their fertility.

CASE REPORTS

A 47-year-old woman, P3A0, presenting to the emergency department at Sultan Agung Islamic Hospital with a mass spontaneously protruding from the vagina few hours before admission. She also complained of lower abdominal pain since a year ago, worsening over the last few days and heavy vaginal bleeding. Her menstrual cycle was irregular with an average duration of seven days. She also complained of dysmenorrhea, moderate low back pain and increased frequency of urinary for the last few months. Any defecation disorders were denied. She was married for 26 years, had a history of uncontrolled hypertension, and had no previous surgical history. She had a history of using the injection contraceptive method ten years ago.

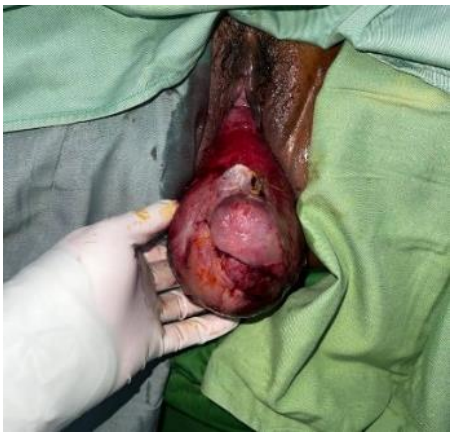

Figure 1. Intraoperative picture of cervical leiomyoma

Physical Examination

The patient is well-appearing. When vital signs were assessed, the body temperature was normal 36,7°C, the blood pressure was increased 195/94 mmHg, pulse 109 beats per minute, and respiration rate 20x/minute. The patient's nutritional status was within the normal range with body mass index of 24,03 kg/m^2. No thrombosis, cellulitis, or other systemic clinical manifestations were discovered.

The abdomen was soft during the examination. No rebound tenderness or guarding was present. A gynecologic examination revealed a mass with a reddish surface and blood protruding out of the introitus. The size of the mass was 20 cm x 8 cm x 12 cm. The mass is mobile, painful, tender on palpation, and seemed to be originating from the cervix.

Investigation

The blood laboratory examination revealed hemoglobin level was 10 g/dL, total leukocytes were 8.390/mm^3, and platelets were 361.000/mm^3. Blood glucose examination was slightly high 155 mg/dl. The laboratory values for liver and kidney function were all within normal range. The coagulation factors are also within normal range. An ultrasound examination showed a normal structure of the uterus visualizing the size of 7,16 cm x 4,67 cm x 4,35 cm.

Treatment

In this case, it was decided to perform a myomectomy since she desired to maintain her fertility. The myomectomy procedure was followed by curettage with written informed consent. Under general anesthesia, the procedure was carried out with an estimated blood loss of 250 cc. Two surgical tampons were inserted inside the vagina after the mass was completely dissected.

The excised tumor was 20 cm x 8 cm x 12 cm in size (Figure 1 and Figure 2). The surface of an open incision looks to be covered in a white mass with a solid consistency. Histopathology examination confirmed densely arranged myometrial smooth muscle fibers woven together in bundles (Figures 3). The signs of malignancy were not found. The histopathology result was suggestive of benign leiomyoma.

Figure 2. Gross specimen of cervical leiomyoma

On the first postoperative day, the patient complained of moderate pain in the lower abdomen. The vital signs were stable. She had a pulse rate of 86 beats per minute, a blood pressure of 117/90 mmHg, and a body temperature of 36,6ºC. Two units of Packed Red Cells (PRC) were administered due to the low hemoglobin level, 8 gr/dL which brought hemoglobin levels to 10.3 gr/dL. On the second postoperative day, she had no longer lower abdominal pain and the tampons were removed. The patient was discharged from the hospital in a good condition and had an uneventful postoperative recovery.

One week later, the patient was scheduled for a follow-up examination for the removal and evaluation of surgical sutures. On the examination, the uterus and

cervix were in normal localization and there was no complaint of abnormal bleeding and incontinence symptoms.

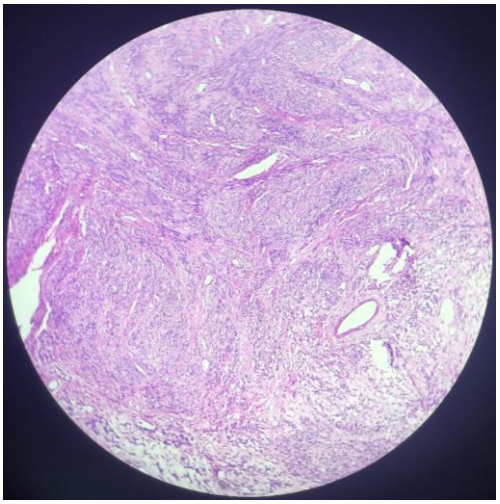

Figure 3. Histopathology of cervical leiomyoma

DISCUSSION

Uterine fibroids are benign smooth muscle tumors that develop in the uterine wall and contain fibroid elements. Larger fibroids are associated with symptoms including anemia, dysmenorrhoea, pressure symptoms, urinary urgency, and subfertility.[10] In this case, the patient presented with a mass protruding out from the introitus with heavy vaginal bleeding which explains the low hemoglobin level on admission.

A key element of providing therapeutic counseling to women with uterine leiomyoma is mapping of fibroids to determine their location and size prior to the treatment.[11] The FIGO (The International Federation of Gynecology and Obstetrics) classification divides myomas into different groups according to where they are located within the uterus: intramural myomas are FIGO types 3-5, submucosal myomas are types 0-2, subserosal myomas are types 6 and 7, and cervical myomas are type 8.[12]

Leiomyomas of the uterine cervix are uncommon and can be challenging to treat and diagnose. The majority of cervical myoma patients are fertile women.[13] The decision to have a myomectomy or hysterectomy in premenopausal women may be in line with her preferences and plans to have children. Age, symptoms, size, and location are further considerations. Women with symptoms who want to maintain their fertility undergo myomectomies. Nevertheless, the only procedure that provides definitive therapy is a hysterectomy.[3] A myomectomy was chosen in this case because the patient experienced symptoms and wanted to preserve her fertility.

CONCLUSION

In conclusion, this was a case of a patient who had symptoms associated with a cervical leiomyoma and was effectively treated with myomectomy and curettage. Myomectomy is the most frequent therapy for symptomatic myomas for women who want to preserve their uterus or have future fertility.

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CONFLICT OF INTEREST

There is no apparent conflict of interest for the authors to declare in this report.

ETHICS APPROVAL

This report was approved by the head of the Department of Obstetrics and Gynecology, Faculty of Medicine, Sultan Agung Islamic University (UNISSULA). To present this case report and any accompanying pictures, the patient's written informed consent was acquired.

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AUTHOR CONTRIBUTION

This case report was written with equal contributions from all authors.

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