An Unsuspected Case of a Degenerating Leiomyoma

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Uterine leiomyomata are the most common neoplasms of the female pelvis. They have been estimated to occur in 20% to 50% of women of reproductive age.[1,2] Most leiomyomata are asymptomatic, and less than 50% of women will have symptoms directly attributed to this condition. It is necessary to be especially alert to diagnose asymptomatic leiomyomata that have unusual symptoms and signs, as shown by the following case.

Case Report

A 30-year-old woman who had a history of uterine fibroids and iron-deficiency anemia became pregnant for the first time and spontaneously aborted at 16 weeks' gestation. She underwent two consecutive dilation and curettage procedures for persistent bleeding within the 5 weeks after the abortion, after which she had a 10-day course of antibiotics. Eight weeks after her second dilation and curettage, she came to her family physician's office complaining of an increasing yellow discharge and mild abdominal pain. Her last menstrual period had occurred 2 weeks before her visit.

The patient was in a monogamous relationship, and her last sexual encounter had occurred 3 months ago. She denied a history of vaginal pruritus, dysuria, urinary symptoms, fevers, chills, or sexually transmitted diseases. Her only medication was ferrous sulfate. Her family history was positive for fibroids in her mother and 3 sisters. Review of systems was notable for fatigue.

Her old records showed exemplary care at another hospital. After an incomplete abortion was diagnosed, she had a dilation and curettage. A surgical pathology report described hemorrhagic and focally necrotic placental fragments. Continued bleeding prompted the second dilation and curettage for incomplete evacuation of uterus, and antibiotics were prescribed for presumed endometritis. After the second dilation and curettage, the histopathology report suggested endometrium undergoing breakdown with a partially necrotic placental implantation site and myometrium with scar and necrotic tissue.

Physical Examination

She was admitted to the hospital for evaluation. When examined, she was normotensive and mildly tachycardic. Findings of her cardiovascular examination were notable for a systolic ejection murmur at the left upper sternal border with radiation to the apex. Her abdomen was tender in the left lower quadrant with a large firm and tender uterus extending 2 cm above the umbilicus. When examined vaginally, she had copious yellow mucoid discharge from the cervix. The cervix was closed and without lesions or cervical motion tenderness. A wet preparation indicated a candidal infection. Specimens cultured for *Neisseria gonorrhoeae* and *Chlamydia* at the time of admission were negative.

Hospital Course

The patient was anemic with hematocrit of 16.2%, for which she received 3 U of packed red blood cells. Her white blood cell count was 13,100/μL. She was given cefoxitin and doxycycline for presumed endomyometritis and a one-time dose of fluconazole for candidal vaginitis. On hospital day 2, an abdominal sonogram showed an enlarged uterus with areas of calcification and dirty shadowing (which distorted the uterine anatomy) with some gas in the uterus. The underlying pathologic cause was unclear. A follow-up magnetic resonance imaging study of the pelvis showed a large amount of organized hematoma within the endometrial cavity, extensive gas formation, and two tiny fibroids. The presence of gas in the uterus raised the question of possible anaerobic infection, and her intravenous antibiotics were changed to ampicillin,

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gentamicin, and clindamycin. On hospital day 5, a gynecologist was consulted, who recommended a hysterotomy or a hysterectomy secondary to degenerating endomyometritis if symptoms did not abate.

Surgical Findings

A laparotomy was performed on day 8 of admission, which showed a uterus 18 to 20 weeks in size with normal tubes and ovaries. There was no evidence of ascites or pus. A hysterotomy of the anterior surface of the uterus exposed a large myoma extending into the uterine cavity with extensive degeneration. The endometrium appeared normal, but the tubal ostia were unidentifiable. The uterine fibroid was surgically removed. A laboratory examination reported a frozen section diagnosis of an infarcted leiomyoma. Specimens taken at that time for Gram stain and aerobic and anaerobic cultures were negative. The final histopathologic diagnosis was a degenerated leiomyoma. Postoperatively, the patient did well, remained asymptomatic, and was sent home from the hospital on hospital day 13.

Discussion

Uterine leiomyomata are exceedingly common and can occur in 20% to 50% of all women. Family physicians will encounter their various typical and atypical symptoms and signs. In the case described, the patient had two dilatation and curettage procedures within 5 weeks of a spontaneous abortion, both for removal of products of conception. After the second dilatation and curettage, the patient had a course of antibiotics. Sonographic examinations at the times of both dilatation and curettage procedures did not indicate the presence of uterine fibroids.

When this patient first came to her family physician, her symptoms, which were 6 days old, were mild abdominal pain and a small amount of yellow discharge. The size of her uterus was consistent with a 20-week gravid uterus. The hypothesis is that rapid growth and necrosis within the fibroid occurred during the 8 weeks before her visit. The diagnosis was not immediately made when she was first seen, however. The previous pregnancy distracted attention from the possibility of a degenerating fibroid, even though the pregnancy was terminated in a second trimester abortion, a known complication of uterine fibroids.

When admitted to the hospital, the patient appeared to have an ongoing infection. Finding gas in the myometrium raised concerns about possible anaerobic infection after the surgical procedures. This diagnosis was further supported by leukocytosis, abdominal pain, and vaginal discharge. The spontaneous abortion, retained products of conception, and continued bleeding requiring the two dilation and curettage procedures were assumed to account for the moderate to severe anemia. The enlarged uterus was thought to be caused by retained products of conception or the possibility of a new pregnancy. The initial differential diagnosis did not include uterine fibroids. The possible diagnosis of leiomyoma with a complication was first considered when the sonogram showed there was an indeterminate mass with dirty shadowing in the uterus.

This case is a reminder that common conditions such as fibroids can have unusual symptoms and signs. Even when confronted with a zebra, it pays to look past his stripes.

Brief Literature Review

The most common upper female genital tract tumors are leiomyomata uteri, or uterine fibroids. Most uterine fibroids are asymptomatic. For that reason, true estimates of prevalence are unknown, but it probably ranges between 20% and 50%.[1,2] Uterine fibroids occur most often during the reproductive years. The symptoms and signs of uterine fibroids are variable, with symptoms occurring in less than 50% of women. Abnormal bleeding and pain occur in approximately one third of cases. Abdominal distortion, genitourinary or gastrointestinal compression, and pelvic pressure can also occur.[3]

The following have been traditional indications for surgical intervention: (1) when there is a rapid change in the size of the fibroid, in particular when there is sarcomatous transformation[2] (to date, however, the normal patterns of growth have not been studied), (2) when uterine fibroids have enlarged to between 12 to 14 weeks in size, (3) when ovaries are inaccessible for evaluation because of the size of the uterine fibroid, and (4) when estrogen replacement therapy for postmenopausal women cannot not be administered because of possible stimulation of the uterine fibroid.[4,5]

Currently there are four clinical indications that might require intervention. The first is progressive

menorrhagia, which could require either years of medical management before menopause or surgical interventions to avoid severe anemia or, on rare occasions, hemorrhagic shock. The second is pelvic pain or pressure, which occurs as the uterus enlarges. Acute degeneration or torsion of a pedunculated fibroid can also be painful. Chronic pain, however, can be caused by adenomyosis, endometriosis, or pelvic infection. The third is persistent infertility or abortions that result from interruption of tubal patency or disruption of the endometrial cavity. Finally, fourth is stress incontinence caused by decreased bladder capacity as the enlarging uterus causes decompression of the bladder. Rarely do hydronephrosis and kidney obstruction occur. Pelvic sonograms, hysteroscopy, and magnetic resonance imaging are useful tools in assessing uterine leiomyomata.[6,7]

The treatment of large uterine fibroids ranges from conservative to surgical. Studies of whether oral contraceptives have a possible protective effect on fibroids have not quantified the risk or given clear support for adverse effects.[3,8] Medical therapy is increasingly used in the interim management of uterine fibroids. Medications, such as antiprogesterone compounds, and gonadotrophin hormone-releasing hormone analog (GnRHa) therapies have stopped growth temporarily. In some cases these therapies have been used to promote reduction in the size of the fibroid. Antiprogesterone compounds, such as mifepristone, have been proposed as medical therapy for fibroids; further investigations are needed, however. Several selective estrogen receptor modulators and pure antiestrogen compounds have been postulated to inhibit the blood supply to the fibroid and thus arrest growth.[9] GnRHa and a continuous combined estrogen-progestogen preparation have been found to yield a 50% reduction in the size of the fibroid in approximately 3 months, thus decreasing the uterine artery blood flow and decreasing blood loss before an endoscopic myomectomy, as well as reducing dysmenorrhea, pelvic pain, and excessive menstrual flow.[10]

Large fibroids have traditionally been removed by abdominal hysterectomy. Removal is now increasingly being accomplished laparoscopically. Vaginal hysterectomies are preferred to abdominal hysterectomy because there are fewer complications and recovery times are shorter. Laparoscopic-assisted vaginal hysterectomies are increasingly being used, as are operative hysteroscopies for symptomatic fibroids.[6] Myomectomy, removal of portions of fibroids, can also be used for fibroids that have a maximum diameter of 10 cm when there are no more than 4.[8] Myomectomy can be accomplished by laparoscopy.[6]

Conclusion

This case of a degenerating fibroid was clinically unique. It is important to remember that fibroids can have typical and atypical signs and symptoms. Initially the cause of menorrhagia and abdominal pain can be mistaken attributed to a sexually transmitted disease. Once infection is ruled out, degeneration and sarcomatous change within the fibroid should be considered. Finally, it would be prudent to consider uterine fibroids in the differential diagnosis when the origin is uncertain. The high prevalence of fibroids disposes them to cause unusual symptoms.

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