Endometriosis: A Part Of The Differential Diagnosis Of Hip Pain

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Endometriosis is a puzzling condition characterized by abnormal growths of tissue resembling endometrium in locations other than the uterine lining. This condition is a common finding in women of reproductive age, and its prevalence is estimated to be 10 to 20 percent in this population.[1] These abnormal tissues respond to cyclical hormonal changes in much the same way as does the uterine lining. Endometriosis has been well recognized as a cyclical cause of pelvic and abdominal pain, but only rarely has it been reported as a cause of hip pain. This report describes a case of endometriosis presenting as cyclic hip pain.

Case Report

A 37-year-old woman came to the office complaining of a 4- to 6-month history of left hip pain occurring only around the time of her menstrual cycle. She was gravida 1, para 1 and was using a diaphragm as her method of birth control. Additionally, to avoid pregnancy, she and her husband often timed their sexual relations to coincide with the perimenstrual part of her cycle. The patient was uncertain whether her hip pain represented a gynecological problem or an orthopedic problem related to the increased sexual activity at that time.

The patient described an aching in the region of her hip, in the area between the iliac crest and the greater trochanter of the femur. She said that her menses occurred slightly irregularly, but she related no abnormal or painful bleeding. There were no abdominal, urinary, or other joint complaints.

On examination she had a normal gait and posture. An examination of the femoral triangle, sciatic notch, trochanteric region, and iliac crest showed no tenderness. Additionally, there was no tenderness of the muscles or the bony structures. The range of motion of the hip flexor, extensor, adductor, and abductor muscles was full and without pain, and there were no sensory deficits on the thigh, buttock, perineum, or rectal areas. Her pelvic examination showed a normal vagina, cervix adnexa, and rectum. A Papanicolaou smear was performed, and the results were normal. I explained to the patient that her hip pain might be related to the change in frequency of sexual relations or possibly endometriosis. She agreed to alter the pattern of sexual relations to avoid increased coital activity around the perimenstrual part of her cycle. The patient agreed to call back after about three cycles.

Approximately 3 months later the patient called to report that starting on the second day of each menstrual cycle, she was developing hip pain lasting several days despite having no sexual relations near the time of her menses. A pelvic sonogram was performed, which showed a complex mass to the left of the midline obliterating the normal contour of the uterus. A differential diagnosis of hemorrhagic cyst, endometrioma, tuboovarian abscess, and cyst adenoma was made by the interpreting radiologist.

Two weeks later the patient was seen by a gynecologist in consultation. The gynecologist found her vagina and cervix to be normal. Her uterus was of normal size, but there was a fullness in the left adnexal region measuring approximately 6 × 6 cm. No right adnexal masses were noted. An ultrasonic examination using a vaginal probe failed to reveal endometrial abnormalities or fibroid tumors, but it confirmed a 7.2 × 6.6 × 4.9-cm multilocular left adnexal mass. Additionally, there was an unexpected finding of an enlarged right ovary measuring 4.1 × 3.1 × 6.2 cm containing several cysts with fine debris. The consulting gynecologist recommended to the patient that she undergo a diagnostic laparoscopy to be followed by a laparotomy as needed.

For scheduling reasons, however, the patient could not undergo any procedures for another month. She was therefore prescribed oral contra-

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ceptives for 1 month to attempt to shrink any physiologic component of the masses. The absence of ascites made the possibility of malignancy less likely. The absence of fever and a normal white cell count made the diagnosis of tuboovarian abscess also less likely.

The patient had normal findings on an intravenous pyelogram, and the results of a multiphasic blood chemistry analysis and carcinogenic antigen-125 blood test were normal. The course of oral contraceptives did not change the size of the masses as shown on a repeat sonogram. After discussion with the patient and her husband, she agreed to bypass the laparoscopy and proceed directly to an exploratory laparotomy. She was taken to the operating room, where on examination she was found to have decreased mobility of the pelvic organs. The surgeon found bilateral adnexal masses with the left-sided mass densely adhered to the lateral pelvic sidewall, the rectum, and the retroperitoneum. All of the masses were removed, as well as the uterus and adnexal structures. The surgeon found no specific compression or involvement of the mass with the lumbar plexus, sciatic, or obturator nerves. Pathologic diagnosis confirmed the clinical impression of endometriosis. Postoperatively, the patient was prescribed progestational agents and remained free of any hip pain even after the resumption of her sexual activities, including episodic coital frequency equal to those times in her perimenstrual cycle before her surgery.

Discussion

No one knows for certain what causes endometriosis. Originally, retrograde menstruation was considered the primary cause of endometrial implantation into the pelvis and abdomen. This theory failed to explain endometriosis in patients with blocked fallopian tubes or endometriosis in unusual locations, such as the lung, brain, or other tissues, or in nonmenstruating patients, such as those with Turner syndrome.[1] Several theories have been postulated, including transportation of endometrial tissue through lymphatic or hematogenous routes or coelomic metaplasia of other tissues.[2]

Pain is thought to be caused by growth of the endometrial tissue stimulated by estrogen and progesterone during the menstrual cycle. The enlarging implants can undergo secretory changes and bleeding. Because hemorrhagic fluid cannot escape, pressure and inflammation increase in and around the lesions. Treatment has included observation, analgesic medications, and hormonal and surgical interventions, depending on the patient's desire for future pregnancy, her symptoms, and the stage of her disease.[1] Diagnosis is aided by the history and physical examination, as well as by such imaging techniques as sonography, computerized tomography, or more recently magnetic resonance imaging.[3]

Endometriosis of the pubis and of the region adjacent to the sciatic nerve has been infrequently described in the literature as a cyclical cause of hip pain.[3,4]

In the case presented, the exact cause of the patient's hip pain cannot be made conclusively. Although the relation of the pain to the menstrual cycle, despite a change in the couple's coital frequency, suggests strongly that endometriosis was a major factor, failure to find nerve compression or involvement makes causality difficult to prove. The patient's symptoms were present 4 to 6 months before she had abnormal findings on physical examination. A magnetic resonance imaging of the hip joint was never performed on this patient, because she was asymptomatic after surgery. One might speculate that in this patient small endometrial implants could have been attached to the lateral pelvic wall or adjacent to nerves or even in the hip joint (and atrophied after surgery). If the hip joint were involved, the pain would have been expected medially.

Based on my experience with this case and after reviewing the literature, I would propose that there is a logical sequence for examining a patient with a similar history of cyclical hip pain corresponding to the menstrual cycle. A thorough history should be undertaken to find out the precise location of the patient's pain in relation to known patterns of hip pain (for example, medial pain as in degenerative joint disease or posterior pain as in radiculopathy). Also, the history should reveal other musculoskeletal or neurologic symptoms. During the physical examination, the physician should focus not only on a careful pelvic and rectal examination, but also on the musculoskeletal and nervous systems. Physical examination, as well as sonography, might fail to show very small endometrial implants. Diagnostic laparoscopy could allow direct visualization of the pelvic structures.

If these procedures fail to show the suspected endometriosis, then magnetic resonance imaging, with attention to the hip joint, pubic ramus, and the regions of the lumbar plexus, obturator, and sciatic nerves, might find a hidden implant.

A recent search of the family practice literature failed to find endometriosis as a cause of hip pain. Family physicians should consider this diagnosis in any women of reproductive age who complains of cyclical hip pain.

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