

Laparoscopic uterine artery dissection in an undiagnosed endometrial stromal sarcoma. Case Report

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Summary

We present a case of a 24-year-old woman, gravida 0, with menometrorrhagia and pelvic pain. A uterine hemorrhagic fibroid was diagnosed after ultrasound and magnetic resonance imaging (MRI). The endometrial biopsy was negative for malignancy. Laparoscopic sentinel lymph node sampling, lavage, and myometrial biopsy with negative results were performed before dissection of the uterine vessels. The final diagnosis of endometrial stromal sarcoma was made by myomectomy and hysterectomy one year later. This case should demonstrate the difficulty of making the right diagnosis of sarcoma before laparoscopic dissection of uterine vessels in patients with symptomatic fibroids.

Key words: Uterine sarcoma; Laparoscopy; Uterine artery occlusion.

Introduction

Uterine sarcomas are a relatively rare group of gynecologic malignancies. Although they may cause symptoms such as pelvic pain or menometrorrhagia, the diagnosis is frequently made after hysterectomy has been performed for presumed benign leiomyomata. As myomectomy and other conservative options for the treatment of leiomyomata – such as uterine artery embolisation (UAE) – increase in popularity, it raises the concern of missed diagnoses and resulting progression [1].

A Medline search from 1994 to 2004 using key words such as “uterine sarcoma” and “uterine artery occlusion, ligation or dissection” we found only three cases of uterine sarcoma after uterine artery embolization for benign leiomyomata [2-4].

We report a case of uterine fibroid treated with laparoscopic uterine artery dissection (LUAD) that was actually a sarcoma.

Case

A 24-year-old woman, gravida 0, was referred to our Department of Obstetrics and Gynecology and Endoscopic Unit, Hospital Kladno, for a symptomatic uterine fibroid with complaints of pelvic pain and menometrorrhagia. She had a history of IUD and irregular bleeding. The patient had been treated by hysteroscopy and laparoscopy in two other hospitals. Pelvic examination revealed an enlarged uterus to the size of the 12th week of pregnancy. Biochemical tests including tumor markers (CEA, CA 19.9) were within normal range except for a minimal elevation of CA125 (56.3 U/ml) levels. Second-look hysteroscopy and curettage were performed. Microscopically simple endometrial atrophy and fibroid tissue were found. Vaginal ultrasonography showed hyperdense lesions filling the entire endometrial cavity.

Ultrasonography Magnetic Resonance imaging (MRI) was carried out to better delineate the endometrium and myometrial wall. MRI showed an expansive uterine tumor with patterns of hemorrhage (Figure 1). It was very difficult to distinguish the endometrial and myometrial line.

In March 2003 the patient underwent explorative laparoscopy, intraoperative washing, pelvic sentinel lymph node dissection, uterine biopsy and dissection of the uterine artery. The operative procedure for LUAD in more detail has been previously described [5]. Laparoscopy was performed in the lithotomy position using videomonitoring equipment. At the time of exploratory laparoscopy and after obtaining washings for cytological examination, a myometrial biopsy was performed. Results of the cytological examination and frozen section were negative. Lateral peritoneum dissection using ultrasonically activated shears (LCS-K5, Ultracission, Ethicon EndoSurgery, Johnson & Johnson, Ltd., Cincinnati, USA) was initiated. The peritoneum was opened and the paravesical and pararectal spaces developed by blunt dissection. Subsequently, blue stained lymph nodes were excised from the fossa obturatoria. The origin of the uterine artery was desiccated from the hypogastric artery and afterwards dissected by ultrasonic shears. The hospital stay was uneventful. After six months, a control MRI examination was performed with persistent uterine findings. The patient had regular bleeding without pelvic pain within the follow-up period.

One year after LUAD she presented to the Department of Obstetrics and Gynecology, Faculty Hospital Pilsen with recurrent pelvic pain and an enlarged nodular myomatous uterus. She had emergency myomectomy via laparotomy. Intraoperative negative freezing section was done. However, the final microscopic diagnosis was low-risk stromal endometrial sarcoma. Exploratory laparotomy and extrafascial hysterectomy followed. The sarcoma was confined to the uterus. On the seventh hospital day she was discharged from the hospital without any postoperative complications. Since the diagnosis was low-grade stromal endometrial sarcoma, postoperative adjuvant chemotherapy and pelvic irradiation were not given. Only follow-up was recommended and there was no evidence of disease at her eight-week postoperative visit.

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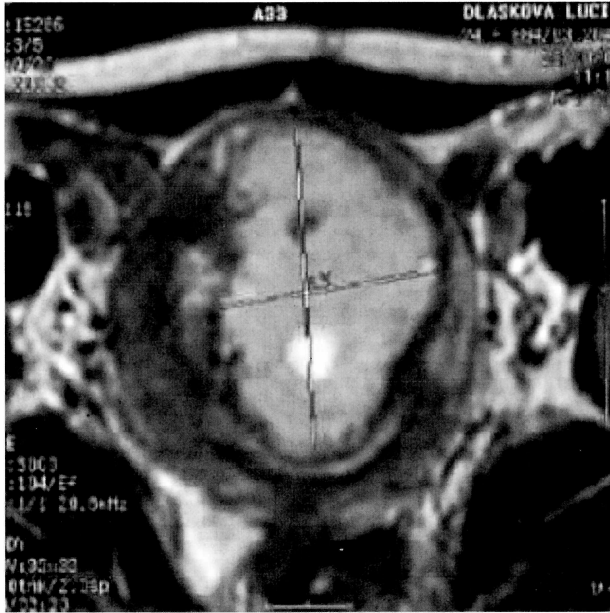


Figure 1. — MRI demonstrates hyperdense multilocular fibroid lesions with peripheral hemorrhage.

Discussion

When considering elective uterine artery embolization (UAE) or any uterus-sparing treatments for women with symptomatic uterine leiomyomata, it is difficult to exclude sarcomas [2]. In the present case the patient underwent laparoscopic dissection of the uterine artery for a symptomatic growing fibroid. A rapidly growing fibroid does not definitively indicate that a sarcoma is present [6]. There are several reports of ultrasound and MRI studies to distinguish benign leiomyomata from sarcoma [7, 8]. Kroncke and Hamm [9] reported their experience with MRI in establishing indications, planning and following UAE for treating symptomatic leiomyomas of the uterus. Contrast-enhanced imaging is a suitable tool for monitoring successful devascularization following embolization and evaluating complications. Recently, the use of positron emission tomography with 18F-fluorodeoxyglucose has been reported to be accurate in a small series of uterine sarcomas [10]. However, the diagnosis of a uterine sarcoma is rarely made preoperatively. While the occurrence of preoperatively undiagnosed uterine sarcoma among patients undergoing hysterectomy has been reported, there are only three case reports of unsuspected sarcomas after UAE [2-4]. Women considering UAE for symptomatic fibroids should be advised about the risk of a possible delayed diagnosis of uterine sarcoma [2].

In our case report, explorative laparoscopy, peritoneal washing, sentinel lymph node sampling and myometrial biopsy were performed before LUAD. However, the results of frozen section were negative. We are afraid that the biopsy sample of myometrial tissue was small and unrepresentative. In two small studies, needle biopsy had

92.5% sensitivity and 100% specificity for diagnosing uterine sarcoma [11, 12]. Kawamura *et al.* [13] have reported on the technique of transcervical needle biopsy of myoma-like tumors in 435 women. They were able to demonstrate the ability to diagnose leiomyosarcoma using strict histopathologic criteria resulting in 100% negative predictive value. If larger prospective studies confirm these results, it might be considered for women who want to preserve fertility.

In spite of our described diagnostic difficulties, we suppose that in cases of suspicious ultrasonography and/or MRI, endometrial and myometrial biopsies are indicated. Explorative laparoscopy, washing, aimed biopsy or myomectomy should be performed before conservative treatment of symptomatic fibroids in women wishing to retain their uterus.

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