

Research Letter

An adenomyomatous polyp presenting as a large hypervascular tumor and its response to a gonadotropin-releasing hormone agonist

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Although endometrial polyps are commonly detected in uterus examinations, adenomyomatous polyps, a kind of endometrial polyp, are rarely detected. In fact, results of a previous study showed that only 14 (1.3%) of the 1100 patients with endometrial polyps were confirmed to have the adenomyomatous type [1]. Endometrial polyps are usually asymptomatic; however, patients with large endometrial polyps may present with abnormal uterine bleeding. Hysteroscopic resection is the standard treatment option for endometrial polyps. Hysterectomy has previously been performed in patients with large adenomyomatous polyps with characteristics that mimic those of leiomyosarcomas [2]. We experienced a case wherein a woman presented with a large intramyometrial tumor that shrank after treatment with a gonadotropin-releasing hormone (GnRH) agonist. A pathological analysis of the tumor after surgical resection revealed that it was an adenomyomatous polyp. The test results of this patient imply that the growth of adenomyomatous polyps is estrogen dependent.

A 31-year-old nulligravida visited our hospital complaining of abdominal pain. Physical examination, including pelvic examination, did not indicate any abnormality. Therefore, a transvaginal ultrasonography scan was performed, which revealed a hypervascular tumor (dimensions: 5.1 × 4.7 cm) occupying the lower half of the uterus (Fig. 1). However, the tumor characteristics were not similar to those of common uterine tumors such as leiomyomas, polyps, or carcinomas. A Doppler ultrasonography scan showed that the tumor had

prominent vessels, with the lowest resistance index being 0.54. An office hysteroscopy was performed; however, the entry of the hysteroscope into the uterine cavity was hindered because of the tumor. Because we were unsure of the type of tumor, a monthly dose of 3.75-mg leuprolide acetate (Leuplin Depot; Takeda, Fujisawa, Japan) was administered empirically. Consequently, the tumor size shrank to 2.2 × 1.9 cm after 1 month of treatment. After 2 months of treatment, the tumor size further shrank to 1.8 × 1.4 cm, and the tumor became an intracavitary tumor with little blood flow (Fig. 2). An office hysteroscopy was performed, the results of which showed

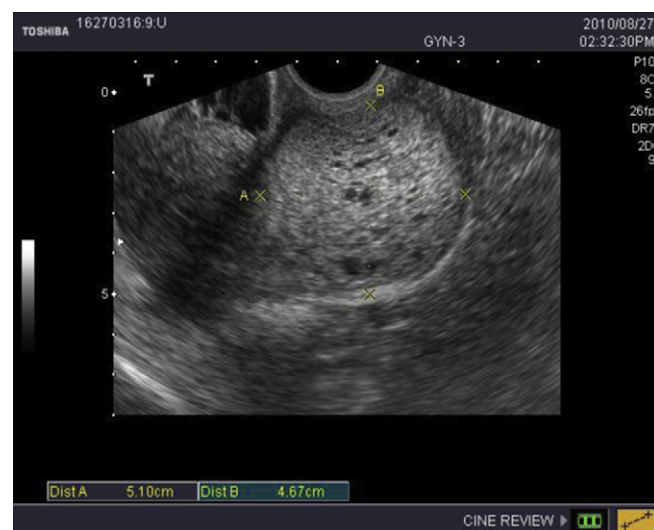


Fig. 1. A transvaginal ultrasonography scan with a sagittal view of the uterus. The fundus is on the left. The mass occupies the lower half of the uterus and shows heterogeneous echotexture.

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Fig. 2. A transvaginal ultrasonography scan of the uterus, obtained after administering two doses of leuprolide acetate. The tumor size has shrunk to 1.8×1.4 cm.

a submucosal tumor in the posterior wall, giving the impression of a leiomyoma. Subsequently, a hysteroscopy was performed, and the tumor was excised without any difficulty. Pathological examination of the excised tumor specimen indicated that it was an adenomyomatous polyp. The woman did not experience any pain 1 week after the surgery.

Endometrial polyps are endometrial overgrowths and contain varying proportions of glands, stroma, and blood vessels. Although the exact cause of the formation of such polyps is unknown, estrogen has been implicated in their pathogenesis. Endometrial polyps grow faster during pregnancy. Obesity, late menopause, estrogen-replacement therapy or oral contraceptive use, and polycystic ovarian syndrome are also risk factors for endometrial polyps. These polyps contain estrogen receptors and progesterone receptors, and the concentrations of these receptors are significantly higher in the glandular epithelium of endometrial polyps than those in the normal endometrium [3].

Adenomyomatous polyp of the uterus is a rare type of polypoid lesion and is characterized by a mixture of myomatous stroma and endometrial glands [4,5]. This type of polyp may be derived from endometrial stroma cells that are capable of smooth muscle differentiation [2] or may be a variant of adenomyosis tissue [5]. Patients with adenomyomatous polyps usually present with vaginal bleeding, menorrhagia, or dysmenorrhea [5]. The standard treatment of these polyps involves hysteroscopy. Endometrial polyps are usually small, but adenomyomatous polyps can be as large as 9 cm [5]. Because of the possibility of malignancy, a hysterectomy or even a radical hysterectomy has been performed for patients with large polyps [2,5]. In the case of our patient, the polyp shrank after she was administered a GnRH agonist, indicating that GnRH agonists can be a useful pretreatment option for

achieving size reduction of adenomyomatous polyps before their resection, as has been used for leiomyomas.

GnRH agonists induce a state of hypoestrogenism after an initial flare-up phase, and are therefore used as a pretreatment option for myomectomy. Pretreatment with GnRH agonists improves the hemoglobin level, reduces blood loss during surgery, and reduces uterine and leiomyoma volumes, which facilitate subsequent surgery [6]. The average reduction in uterine and leiomyoma volumes is 40–50%, and most of the reduction occurs in the first 12 weeks [7,8]. The greatest proportion of shrinkage occurs after the 1st month and subsequently shows a progressive decline [7]. In our patient, the tumor size shrank to 1.8×1.4 cm with little blood flow, after administering two doses of GnRH agonist; therefore, we decided to proceed with the surgery.

The adverse effects of GnRH agonist therapy are caused by hypoestrogenism and include hot flashes, insomnia, mood swings, headache, and vaginal dryness. Severe adverse effects are rare, and only heavy vaginal bleeding due to degenerating submucosal leiomyomas has been reported [9]. Our patient only complained of hot flashes after GnRH agonist therapy and she did not experience any severe adverse effects.

This case report shows that adenomyomatous polyps can present as hypervascular tumors and that these polyps respond to GnRH agonist therapy. Furthermore, the findings of our case report imply that the growth of adenomyomatous polyps is estrogen dependent.

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