Tamoxifen and giant endometrial polyp

E. Erdemoglu, *M.D.*; **M. Güney,** *M.D.*; **B. Keskin,** *M.D.*; **T. Mungan,** *M.D.*

Department of Obstetrics and Gynecology, Faculty of Medicine, Süleyman Demirel University, Isparta (Turkey)

Summary

We present the case of a woman with a giant endometrial polyp of uncommon dimension who was receiving adjuvant tamoxifen for breast cancer. In her gynecologic examination, she had a mass measuring 3 x 4 x 4 cm protruding from the cervical os. The mass was extirpated under general anesthesia. The mass originated from the endometrial cavity. The endometrial polyp measured 10 x 6 x 3 cm macroscopically and was found to be benign under microscopic examination. We conclude that physicians should be aware of the confounding effects of tamoxifen on the histological and ultrasonographic appearance of the endometrium.

Key words: Tamoxifen; Endometrial polyp; Breast cancer.

Introduction

Tamoxifen (TAM) is a synthetic non-steroid anti-estrogen that has been used effectively for several years in the adjuvant treatment of breast cancer. Although its therapeutic effect is due to its anti-estrogenic properties, the drug also shows modest type B estrogen-receptor agonist activity during the menopausal period in which estrogens are at a low level. Owing to the fall in estrogen levels in menopause, tamoxifen provokes an up-regulation of both estrogen and progesterone receptors in endometrial tissue. This causes an inappropriate response of basal layer proliferation of the endometrium and constitutes the basis of hyperplasia and polyps in the tissue [1]. TAM has been reported to be associated with various endometrial pathologies, including endometrial carcinoma [2, 3]. However, endometrial polyps have been described as the most common endometrial pathology in association with postmenopausal tamoxifen treatment [1, 4]. Malignant changes were observed in 3-10.7% of endometrial polyps recovered in postmenopausal breast cancer TAM-treated patients [5-7].

Various risk factors have been identified for endometrial polyps in these patients, such as older age at menopause, longer duration of breast disease, long-term TAM therapy (48 consecutive months), heavier body weight, and thicker endometrium measured by transvaginal ultrasonography (TVS) [7-9]. We present the case of a woman with a giant endometrial polyp of uncommon dimension who was receiving adjuvant TAM for previous breast cancer.

Case Report

A 55-year-old, gravida 7, parity 6, was referred to the Department of Obstetrics and Gynecology, Faculty of Medicine, University of Süleyman Demirel for postmenopausal bleeding in March 2007. She had been treated by a modified radical mastectomy for an estrogen receptor-positive and progesterone receptor-negative T2/N1/M0 grade 2-3 invasive ductal right breast cancer in 2002 and she had been receiving 20 mg of adjuvant tamoxifen daily for five years. In her previous gynecologic history, she had had a D&C in 2005 which was reported to be an endometrial polyp and a biopsy of the present mass in February 2007 was reported as a suspected cervical adenocarcinoma.

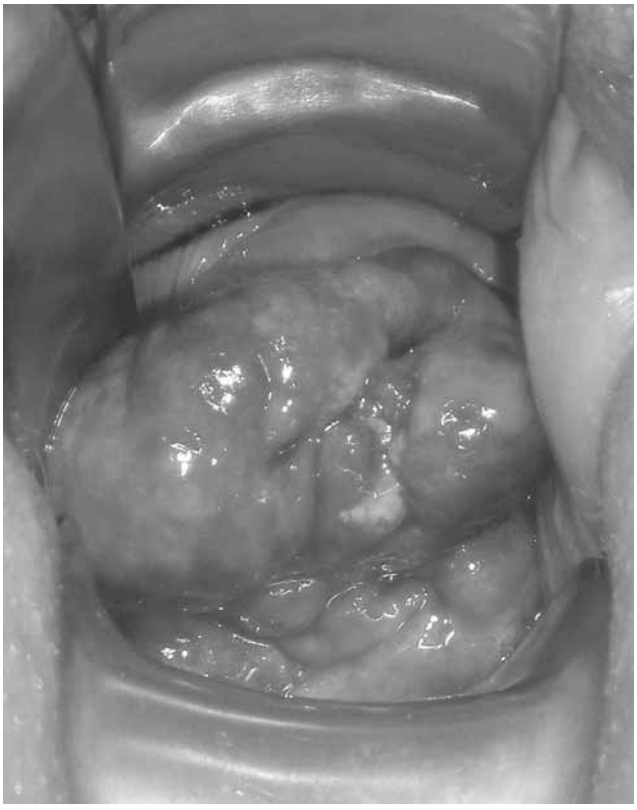
In her gynecologic examination, she had a mass measuring 3 x 4 x 4 cm protruding from the cervical os. TVU revealed an enlarged uterus with a markedly increased endometrial thickness of 3 to 4 cm, with a multicystic appearing mass. She had extirpation of the mass under general anesthesia. The mass originated from the endometrial cavity and measured 10 x 6 x 3 cm (Figure 1). Microscopically cystically dilated glands lined with flattened epithelium surrounded by dense, condensed stroma were found (diagnosis was benign endometrial polyp). The patient was discharged on the same day without any complications.

Discussion

This ws a case of a large, benign endometrial polyp in a postmenopausal patient after five years of TAM treatment. Since TAM is widely used in breast cancer treatment, an increased incidence of endometrial hyperplasia, polyps, and a two- to three-fold increased risk of endometrial adenocarcinoma and endometrial sarcoma have been described [10, 11]. Endometrial polyps represent the most common endometrial pathology with postmenopausal TAM exposure, with an incidence of 8-36% [1, 4]. Various risk factors have been identified for endometrial polyps recovered from postmenopausal breast cancer TAM treated patients [7-9]. Age at menopause was significantly older, duration of breast disease was significantly longer, body weight was significantly heavier, and endometrial thickness measured by TVS was significantly thicker among postmenopausal breast cancer TAM-treated patients with endometrial polyps than in similar patients without any endometrial pathology [9]. A significant increase in secondary endometrial thickening, measured ultrasonographically, in postmenopausal TAM-treated patients was found to be associated with a high rate of endometrial pathologies, including polyps [4].

Revised manuscript accepted for publication July 30, 2007

Fig. 1



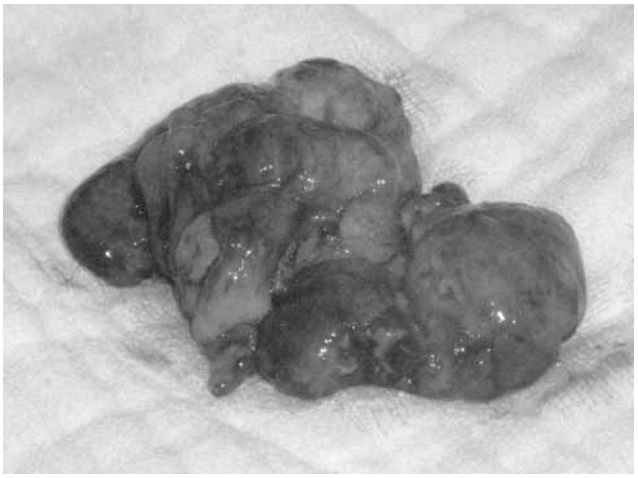


Fig. 2

Figure 1. — A giant endometrial polyp which developed after prolonged tamoxifen treatment.

Figure 2. — Extirpated mega-polyp measuring 10x6x3 cm.

TVU is a noninvasive method of screening for endometrial cancer; however, in postmenopausal tamoxifen-treated women, TVU can give confounding ultrasound images [12]. In as many as 90% of postmenopausal tamoxifen users, TVU shows an increased irregular endometrial thickness suggestive of endometrial pathology [12, 13]. TAM-treated patients should be instructed and encouraged to report abnormal vaginal bleeding. Those who present with symptoms should have a hysteroscopy with endometrial sampling to exclude endometrial cancer or sarcoma, irrespective of the ultrasound findings.

Physicians should be aware of the confounding effects of TAM on the histological and ultrasonographic appearance of the endometrium. A multicystic endometrium or benign polyps, such as found in our patient, are typical for chronic TAM users, and may confuse the unaware.

References

[1]Caschetto S., Cassaro N., Consalvo P., Caragliano L.: "Tamoxifen and giant endometrial polyps". *Minerva Ginecol*., 2000, *52,* 459.

[2] Neven P., De Muylder X., Van Belle Y., Vanderick G., De Muylder E.: "Tamoxifen and the uterus and endometrium". *Lancet,* 1989, *2,* 375.

[3] Barakat R.R., Wang G., Curtin J., Vlamis V., Hoskins W.J.: "Tamoxifen use in breast cancer patients who subsequently develop corpus cancer is not associated with a higher incidence of adverse histologic features". *Gynecol. Oncol*., 1994, *55,* 164.

[4] Cohen I., Perel E., Flex D., Tepper R., Altars M.M., Cordoba M., Beyth Y.: "Endometrial pathology in postmenopausal tamoxifen treatment: comparison between gynecologicaly symptomatic and asymptomatic breast cancer patients". *J. Clin. Pathol*., 1999, *52,* 278.

[5] Schlesinger C., Kamoi S., Ascher S., Kendell M., Lage J.M., Silverberg S.G.: "Endometrial polyps: a comparison study of patients receiving tamoxifen with two control groups". *Int. J. Gynecol. Pathol*., 1998, *17,* 302.

[6] Deligdisch L., Kalir N., Cohen C.J., de Latour M., Le Bouedec G., Penault-Llorca F.: "Endometrial histopathology in 700 patients treated with tamoxifen for breast cancer". *Gynecol. Oncol*., 2000, *78,* 181.

[7] Cohen I., Azaria R., Shapira J., Dror Y., Tepper R.: "The significance of secondary ultrasonographic endometrial thickening in postmenopausal tamoxifen-treated women". *Cancer,* 2002, *94,* 3101.

[8] Cohen I., Altaras M.M., Shapira J., Tepper R., Rosen D.J.D., Cordoba M., Beyth Y.: "Time-dependent effect of tamoxifen therapy on endometrial pathologies in asymptomatic, postmenopausal breast cancer patients". *Int. J. Gynecol. Pathol*., 1996, *15,* 152.

[9] Cohen I., Azaria R., Bernheim J., Shapira J., Beyth Y.: "Risk factors of endometrial polyps resected from postmenopausal patients with breast carcinoma treated with tamoxifen". *Cancer,* 2001, *92,* 1151.

[10] Bergman L., Beelen M.L., Gallee M.P.: "Risk and prognosis of endometrial cancer after tamoxifen for breast cancer: Comprehensive Cancer Centres' ALERT Group-Assessment of Liver and Endometrial Cancer Risk Following Tamoxifen". *Lancet,* 2000, *356*, 881.

[11] Bernstein L., Deapen D., Cerhan J.R., Schwartz S.M., Liff J., McGann-Maloney E. *et al*.: "Tamoxifen therapy for breast cancer and endometrial cancer risk". *J. Natl Cancer Inst*., 1999, *91*, 1654.

[12] Mourits M.J., Van der Zee A.G., Willemse P.H., Ten Hoor K.A., Hollema H., De Vries E.G.: "Discrepancy between ultrasonography and hysteroscopy and histology of endometrium in postmenopausal breast cancer patients using tamoxifen". *Gynecol. Oncol*., 1999, *73,* 21.

[13] Cohen I., Rosen D.J., Tepper R., Cordoba M., Shapira Y., Altaras M.M. *et al*.: "Ultrasonographic evaluation of the endometrium and correlation with endometrial sampling in postmenopausal patients treated with tamoxifen". *J. Ultrasound Med*., 1993, *12*, 275.

Address reprint requests to:
E. ERDEMOGLU, M.D.
Kıbrıs Sok. 25/7, Elçi Apt.,
Aşagıayrancı, Ankara (Turkey)
e-mail: evrimmd@yahoo.com