

Endometrial polyp harboring a primary B-cell non-Hodgkin lymphoma: a useful in-office hysteroscopic approach

U. Indraco¹, R. Ranaldi², M. Mirabile³, R. Centurioni³

¹ Complex Operative Unit of Obstetrics and Gynecology, Hospital of Civitanova Marche, Area Vasta 3, Civitanova Marche

² Complex Operative Unit of Pathology, Hospital of Macerata, Area Vasta 3, Macerata

³ Complex Operative Unit of Internal Medicine of Civitanova Marche, Area Vasta 3, Civitanova Marche (Italy)

Summary

A non-menopausal woman underwent gynecological evaluation for spotting and menstrual irregularities. After first line gynecological assessments, the patient underwent office hysteroscopy. By using an in-office technique, two isthmic endometrial polyps and one cervical polyp were removed. One endometrial polyp was found to harbor a B-cell high-grade lymphoma just on the apex (found to be necrotic). The following staging examinations and the pathological assessment of the endometrium, the uterus, the adnexa, and the lymphatic regional nodes did not find any localization of the lymphoma. No additional treatments were done. The patient is alive and disease-free at 18 months follow-up.

Key words: Endometrial polyp; B-cell lymphoma; Hysteroscopy.

Introduction

Lymphomas of the genital tract are uncommon. Some cases reported in literature demonstrate the possibility of the primary onset of lymphomas in the genital tract, usually presenting as B-cell lymphomas and sometimes multifocal lymphomas [1]. In only four cases, a lymphoma was found in endometrial polyps to the best of the present authors' knowledge [2-5].

Herein, a case of a primary B-cell lymphoma arising in an endometrial polyp is reported in order to improve the knowledge about this exceptional situation.

Case Report

A non-menopausal woman, aged 53 years, presented to her own gynecologist to check menstrual irregularities and spotting. Her personal history was uneventful. The gynecologist performed a gynecological examination, a specular examination, a pap smear, and an ultrasonographic transvaginal scan. No abnormalities were found at the gynecological examination, at the specular examination, and at pap smear. The ultrasonographic transvaginal scan resulted in an aspecific endometrial irregularity. Therefore, the patient was counseled to plan a hysteroscopy, to better understand the bleeding site in endometrium. The hysteroscopy was made with a Bettocchi hysteroscope, allowing endometrial biopsies or in-office operative procedures. The hysteroscopist detected two endometrial polyps and a cervical polyp. The hysteroscopic endometrial pattern was proliferative and normal, and the tubal orifices were normal. The endometrial polyps were both at isthmic level of the endometrium on the posterior wall of the uterus. In one of them, a necrotic area on the apex was detected as the bleeding site. All the polyps, both cervical and endometrial, were removed with 2.5 French forceps of the Bettocchi hysteroscope, by tractioning them

from the base. This technique avoids polyps' morcellation and improves pathological diagnosis [6].

Unexpectedly, the histological examination showed that the apex of the bleeding polyp was infiltrated by atypical lymphoid cells, with large nucleus, along with multiple nucleoli and frequent mitosis (Figure 1). The lesion was two mm across the largest diameter. The immunohistochemical analysis demonstrated that the neoplastic cells were positive for CD20 and Bcl-6, and negative for CD3, CD5, CD10, CD23, Bcl-2, CD30, and Alk-1. The Ki67 proliferative index was 95%. Based on these findings and after a careful review of the slides, the diagnosis of a B-cell high-grade lymphoma was done.

The patient was urgently referred to hematological evaluation. Thus, a total body positron emission tomography (PET), a total body computerized tomography with contrast, a colonoscopy, and bone marrow sampling were performed. All these examinations excluded lymphatic localizations. Therefore, a primary localization of the B-cell lymphoma in the endometrium was strongly suspected. A laparoscopic hysterectomy with annessectomy and regional lymphadenectomy was performed for staging and treating the disease. The pathological examination resulted in a normal pattern of the uterus, ovaries, and nodes. Therefore, it was concluded that the primary localization of the B-cell lymphoma was in the endometrial polyp. The postoperative course of the patient was uneventful. No other therapies were scheduled. Patient is fine at 18 months follow-up.

Discussion

To date, four other cases of lymphomas in endometrial polyps were reported [2-5]. In the case of Rittenbach *et al.* [2], large atypical lymphoid cells with immunophenotypic pattern of B-cell lymphoma were found in bioptic fragments of an endometrial polyp protruding from cervical os. The pattern of B-cell lymphoma within the polyp was con-

Revised manuscript accepted for publication April 3, 2015

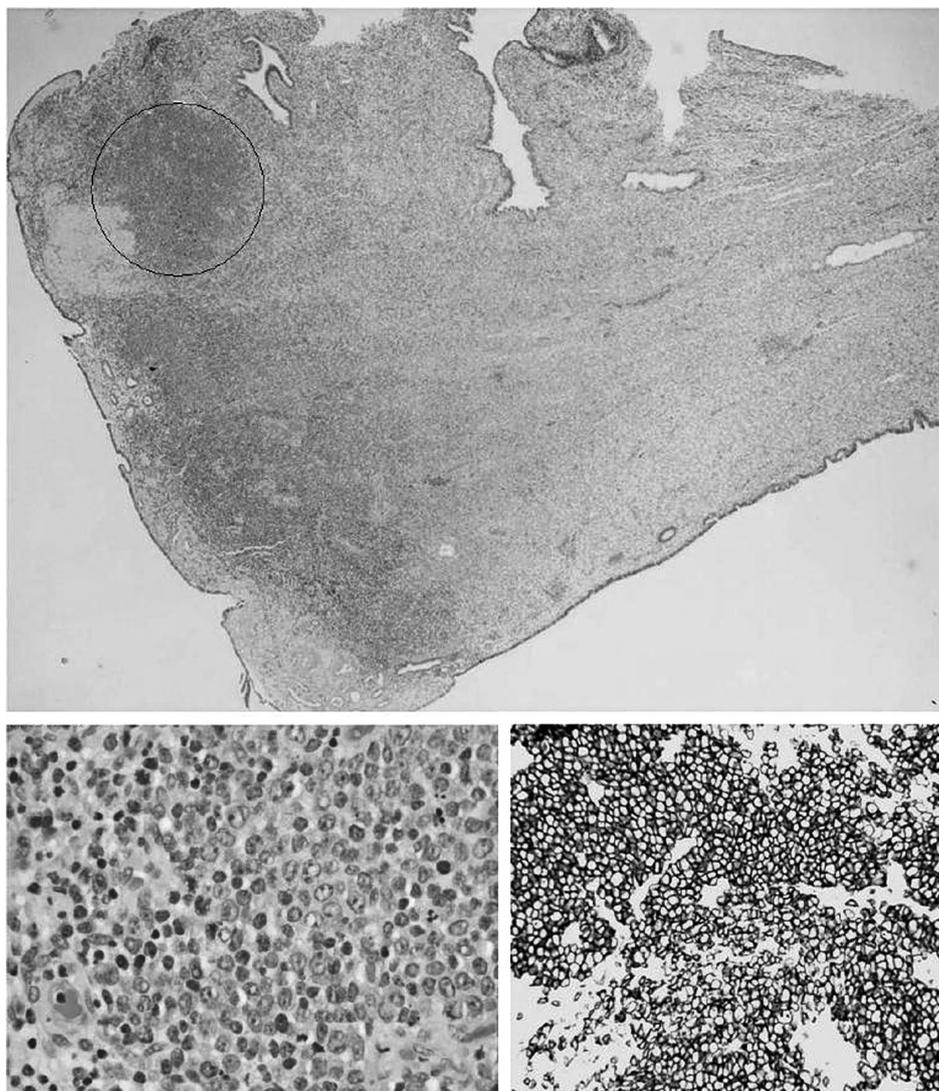


Figure 1. — Upper: the excised polyp contains an area of increased cellularity (circle, H&E, $\times 20$). Bottom left: at higher magnification, the area is composed of blastic lymphoid cells (H&E, $\times 400$). Bottom right: The neoplastic cells show strong and diffuse CD20 positivity (CD20, $\times 250$).

firmed after total hysterectomy, because uterus, endometrium, and another endometrial polyp were not involved in the disease. Histological signs of chronic inflammation in the polyp did not involve malignancy, two leiomyomas, and adenomyosis were also described. No antitumor therapy was done. After three years from surgery, patients was free from disease.

In the case of Annibali *et al.* [3], a B-cell MALT-type lymphoma was found after endometrial polyp removal. No other surgery and therapy was done and the patient was free from disease at 24 months follow-up.

More recently, Xia *et al.* [4] reported a case of a large intravascular B-cell lymphoma within an endometrial polyp. With just the removal of the polyp, the patient is alive at ten months follow-up. However, by reading the Xia *et al.* case [4], one can understand a diffusion of the disease at the time of endometrial polyp removal.

Additionally, Guldrís *et al.* [5] reported a primary diffuse non-Hodgkin B-cell lymphoma in an endometrial polyp and in endometrium. The disease was reported in two lymphatic nodes as well. A combined chemotherapy and radiotherapy were performed and remission was reported at 18 months follow-up.

The present case shares some similarities with the cases of Rittenbach *et al.* [2] and Annibali *et al.* [3]. In both cases, the neoplasm was confined to endometrial polyps, and seemed to have a favorable prognosis. However, in the present case, there was a large B-cell non Hodgkin lymphoma, like the one of Rittenbach *et al.* [2]. The Rittenbach *et al.* [2] case and the case presented here underwent both hysterectomy. The surgical removal of the uterus (and, in the present case, of the adnexa and of the lymphatic nodes) excluded the diffusion of the neoplasm to other sites of the genital tract. No additional therapies

were done, with good prognosis. Overall, endometrial primary lymphoma may onset like a polypoid lesion [1] or may associate to endometrial polyps [7]. Therefore, it should be recommended to quickly remove all the endometrial polyps and then the uterus in order to reach a diagnosis. It could be speculated that the endometrial polyp removal may be the first line surgical treatment for a localized primary B-cell non-Hodgkin lymphoma of the endometrial polyp. Moreover, tricks for improving the pathological assessment should be used. The in-office hysteroscopic procedure proves to be effective for both the pathological examination and a quick first line surgical therapy.

In conclusion, endometrial polyps may exceptionally harbor primitive B-cell non-Hodgkin lymphomas. The pathogenesis and the treatment of such exceptional situation needs further investigations, but a two-step surgical approach (polypectomy and hysterectomy) could be effective in the localized cases. The present authors recommend to report cases of lymphomas arising in endometrial polyps, due to the need of understanding the best treatment to schedule for such an exceptional condition.

References

- [1] Lagoo A.S., Robboy S.J.: "Lymphoma of the genital tract: current status". *Int. J. Gynecol. Pathol.*, 2005, 25, 1.
- [2] Rittenbach J., Cao J.D., Weiss L.M., et al.: "Primary diffuse large B-cell lymphoma of the uterus presenting solely as an endometrial polyp". *Int. J. Gynecol. Pathol.*, 2005, 24, 347.
- [3] Annibaldi O., Romeo A.A., Agostinelli C., et al.: "A case of primary MALT lymphoma of the endometrium presenting as an asymptomatic polyp". *Ann. Hematol.*, 2009, 88, 491.
- [4] Xia Y., Wang Y., Jiang Y., et al.: "Primary intravascular large B cell lymphoma of the endometrium". *Acta. Histochem.*, 2014, 116, 993.
- [5] Guldris E.M., Vázquez P., Fernández A.: "Primary endometrial non-Hodgkin's lymphoma treated by chemotherapy and radiotherapy". *Acta. Obstet. Gynecol. Scand.*, 2013, 92, 606.
- [6] McCluggage W.G.: "Miscellaneous disorders involving the endometrium". *Semin. Diagn. Pathol.*, 2010, 27, 287.
- [7] Ivengar P., Deodhare S.: "Primary extranodal marginal zone B-cell lymphoma of MALT type of the endometrium". *Gynecol. Oncol.*, 2004, 93, 238.

Address reprint requests to:
U. INDRACCOLO M.D., Ph.D.
Via Montagnano, 16
62032 Camerino (MC) Italy
e-mail: ugo.indracco@libero.it