

# Endometrial Adenocarcinoma Presenting as Hematometra with Underlying Thickened Endometrial Lining in a Postmenopausal Woman – A Case Report

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**Abstract.** *Background:* Although most postmenopausal women diagnosed with endometrial cancer usually present with vaginal bleeding, when complete cervical stenosis is present, this sign may be missing. In these cases, the patient usually complains for pelvic or abdominal pain while the transvaginal ultrasonography might reveal the presence of an intrauterine fluid collection in association with a thickened endometrial lining. *Case Report:* We present the case of a 65-year-old patient who presented with association of pelvic pain, enlarged uterine cavity with an underlying hematometra and an irregular, thickened endometrium who was submitted to surgery for total hysterectomy, bilateral adnexectomy, pelvic and para-aortic lymph node dissection. *Conclusion:* Histopathological studies revealed the presence of a well-differentiated endometrial adenocarcinoma. At three years of follow-up, the patient is free of any recurrent disease.

Endometrial carcinoma is often suspected in postmenopausal women presenting vaginal bleeding. However, in certain cases of cervical stenosis arising from aging or previous cervical infection, vaginal bleeding might not be present (1, 2). Due to the absence of such an evident symptom, diagnosis might be delayed. We present the case of a 65-year-old patient who presented for diffuse pelvic pain for whom the transabdominal and transvaginal ultrasonography revealed the presence of an enlarged fluid-filled uterine

cavity associated with thickened, irregular endometrial lining and an endometrial polyp.

## Case Report

A 65-year-old patient presented for diffuse pelvic pain; trans-abdominal ultrasonography revealed the presence of a large pelvic mass with fluid content, while gynecologic examination showed the absence of any signs of vaginal bleeding; however, a complete cervical stenosis was found. Questioning the patient on her personal pathologic antecedents, a history of cervical intraepithelial neoplasia, treated by electrosurgical conization, was discovered. Transvaginal ultrasonography revealed the presence of an enlarged fluid-filled endometrial cavity associated with thickened, irregular endometrial lining having a maximum height of 6 mm and an endometrial polyp (Figure 1a, b, c and d). The patient was submitted to surgery and a total hysterectomy with bilateral adnexectomy, pelvic and para-aortic lymph node dissection was performed (Figures 2-5). The histopathological studies revealed the presence of a well-differentiated endometrial adenocarcinoma with three positive pelvic lymph nodes and a single positive para-aortic lymph node. The postoperative course was uneventful, with the patient being discharged on the sixth postoperative day. One month after surgery, the patient was submitted to adjuvant oncologic treatment. At three years of follow-up, the patient remains free of any local or distant recurrence.

## Discussion

In postmenopausal women, the main alarming sign, that leads to diagnosis of endometrial cancer, is the presence of vaginal bleeding. However, this symptom might not be present in cases with cervical stenosis due to aging, previous genital infections or personal history of irradiation. If this occurs, an

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*Key Words:* Endometrial adenocarcinoma, postmenopausal women, hematometra.

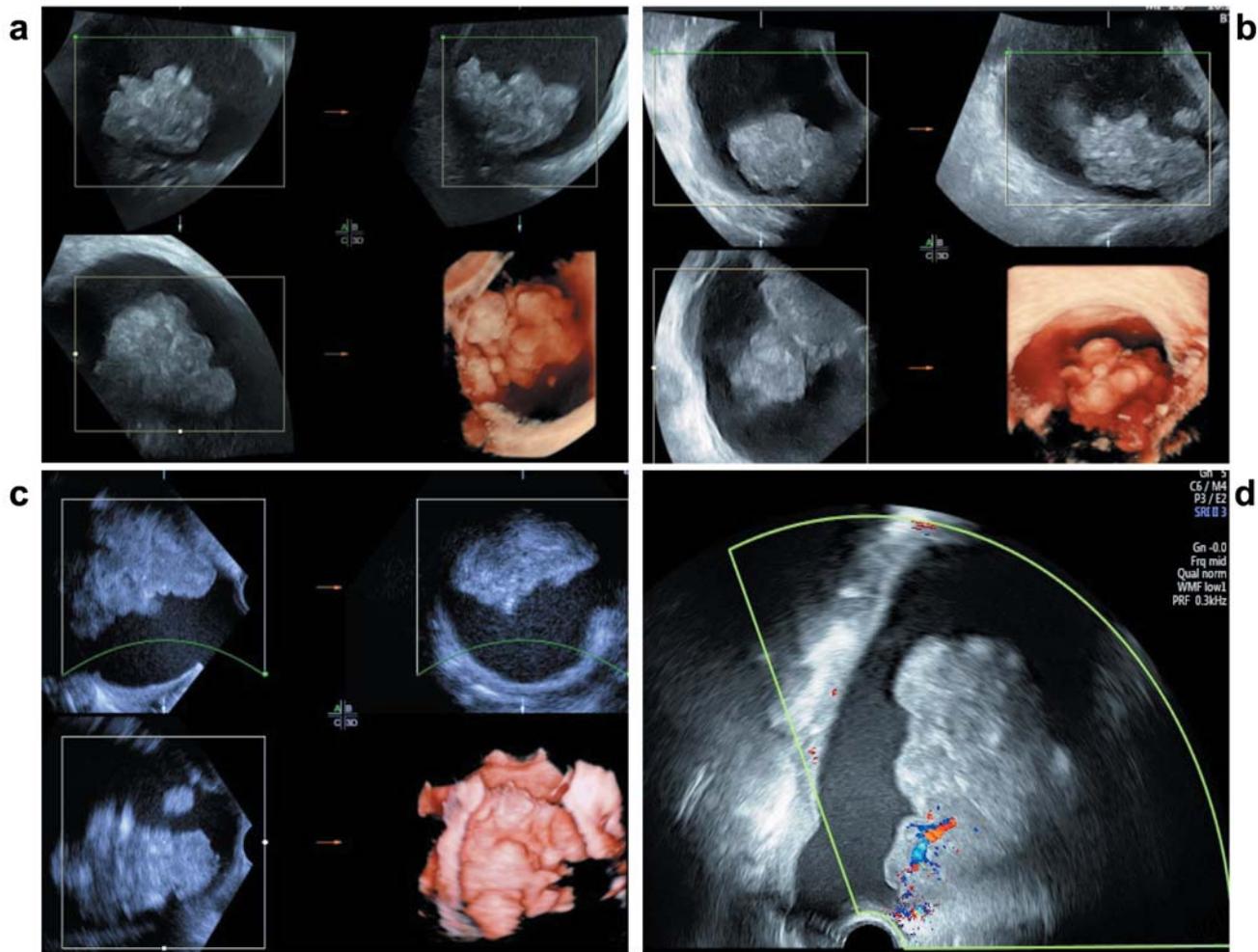


Figure 1. Transvaginal ultrasound revealing the presence of an endometrial polyp associated with hematometra (a, b, c, d).

important delay of diagnosis might be encountered. Most often, patients presenting congenital cervical atresia will develop symptoms, such as dysmenorrhea, pelvic pain or foul vaginal discharge one or two years after menarche (1, 2). Other pathological findings associated with cervical stenosis are endometriosis and tubo-ovarian abscesses that are expected to result from menstrual backflow or retrograde bacterial infections (1, 2).

When it comes to long-term complications after conization, complete cervical stenosis is an unusual complication. In the last decades, due to the increase of the number of patients diagnosed with cervical intraepithelial neoplasia treated with electrosurgical conization, the rate of serious complications, such as cervical stenosis and reproductive problems, significantly increased (3). Complete cervical stenosis remains one of the most severe complications associated with the development of

hematometra during menstrual periods and has an estimated incidence of less than 1% (4, 5). The most important factors predicting the apparition of complete cervical stenosis after conization are related to the type of conization (electrosurgical conization versus laser conization) and the age of the patient. In Baldauf *et al.*'s study, the incidence of complete stenosis ranges between 1.3-5.2% after electrosurgical conization and between 0-2.5% after laser conization (6). Among patients submitted to laser conization, large studies demonstrated that the age of the patients significantly influences the risk of cervical stenosis (7, 8). In Penna *et al.*'s study, 1,218 patients with cervical intraepithelial neoplasia were submitted to laser conization; the authors reported that the global incidence of cervical stenosis was 7.1% with a significantly higher percent among postmenopausal women. Additionally, the same authors demonstrated that the rate of recurrent

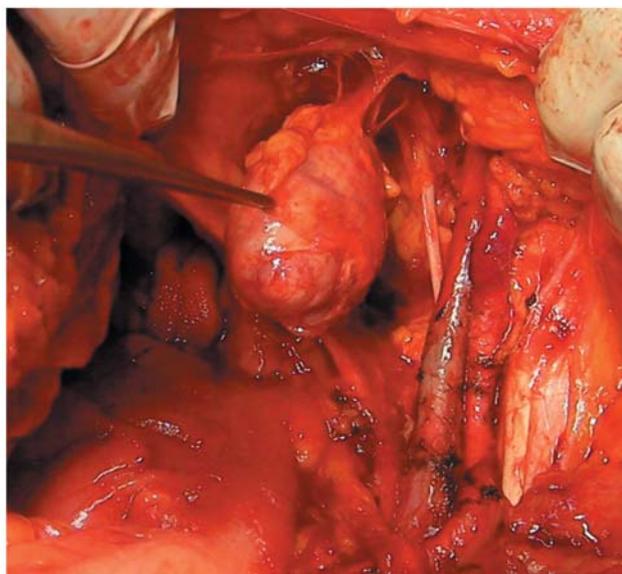


Figure 2. Large pelvic adenopathic mass.

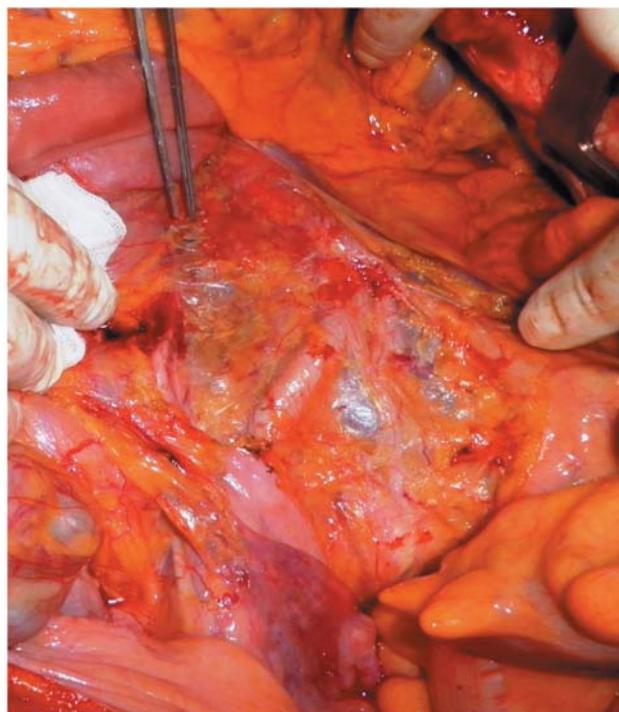


Figure 4. Large para-aortic adenopathic mass.



Figure 3. The final aspect after total hysterectomy with bilateral adnexectomy and pelvic lymph node dissection.

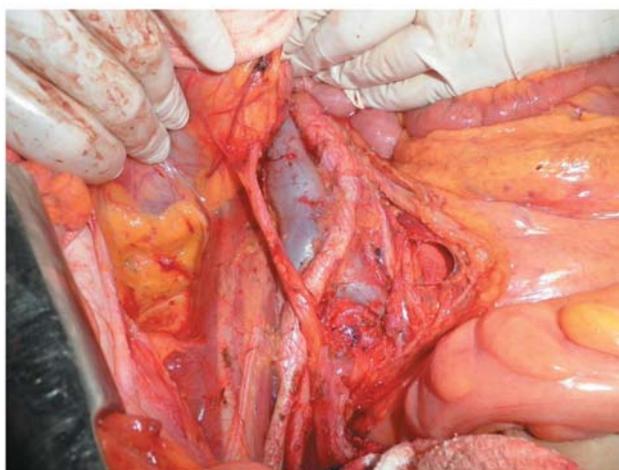


Figure 5. The final aspect after para-aortic lymph node dissection.

cervical intraepithelial neoplasia and cervical stenosis was higher among postmenopausal women, while two cases were diagnosed with recurrent disease only after hysterectomy due to the presence of an insurmountable stenosis. However, the same study demonstrated that estrogen-based therapy after conization decreases the risk of complete stenosis, thus revealing a possible connection between an estrogenic deficiency state and cervical stenosis (7).

Less is known, however, about the association between hematometra and endometrial cancer as diagnosis may fail due to the absence of the most common sign, the presence of vaginal bleeding. A similar case was reported by Wu *et al*. in 1999 where a 64-year-old postmenopausal woman presented for abdominal pain and was diagnosed with a large pelvic cyst. Transvaginal ultrasonography showed the

presence of a thick endometrial lining in association with hematometra, while the history of the patient revealed an episode of pelvic irradiation. The patient was submitted to total hysterectomy with bilateral adnexectomy, pelvic lymph node sampling and peritoneal washing. The histopathological study of the specimen revealed the presence of a stage IB, grade I endometrial adenocarcinoma (9).

The presence of uterine fluid collections in postmenopausal women is considered a sign of an underlying malignancy; however, the estimated incidence varies widely between different studies: while Breckenridge *et al.* reported an incidence rate of 94% of uterine cervix or uterine body malignancies among patients with uterine fluid collections (10), Carlson *et al.* reported an incidence of 25% of gynecologic malignancies (two cases of ovarian cancer, one case with tubal cancer, one endometrial cancer and one cervical cancer) among 20 postmenopausal patients with uterine fluid collections (11). On the contrary, Goldstein *et al.* reported the association of normal atrophic endometrial lining with cervical stenosis and intrauterine fluid in postmenopausal women and stated that endometrial sampling, in order to exclude a malignant degeneration, is recommendable only in cases presenting a thicker than 3 mm endometrial lining. Additionally, the authors postulated that, in cases presenting with atrophic endometrial lining and cervical stenosis, the intrauterine fluid accumulation actually represents a transudate with no pathological implication (12).

In Vuento *et al.*'s study (13), conducted on a group of 1,074 asymptomatic postmenopausal women at the University of Turku, Finland, the authors studied the correlation between the association of uterine fluid collections and endometrial cancer. Among the 1,074 patients, an endometrial fluid accumulation was found in 134 cases (12%). Patients presenting uterine fluid accumulation had a mean weight lower than those without intrauterine fluid ( $p=0.03$ ) and a longer time since menopause ( $p=0.001$ ). Also, 9% of the patients presenting uterine fluid accumulation had a tight cervical stricture, precluding endometrial sampling. The mean endometrial thickness was 4.5 mm in patients with normal histological aspect and 6.8 mm in cases with abnormal histopathological results. Among patients with thickened endometrial lining, the positive diagnosis of malignancy was found in a single case. Among patients presenting intrauterine fluids, 11% were also diagnosed with solitary or multilocular cysts with a maximum diameter of 25 mm, all of them being monitored by repeated ultrasonography. The authors concluded that all postmenopausal women who are diagnosed with endometrial fluid accumulation should be carefully followed-up; furthermore, endometrial sampling was recommended in cases presenting an enlarged endometrial lining (13).

In a similar retrospective study conducted by Takacs *et al.*, 343 postmenopausal patients with endometrial fluid

collection on pelvic echography were included and classified according to the histopathological studies of the specimens retrieved at endometrial biopsy, hysteroscopy or hysterectomy in a non-benign group (with cervical or endometrial carcinoma or hyperplasia) and a benign group (cases with benign conditions). Endometrial lining measurements revealed a significantly thicker endometrium among patients in the non-benign group compared to the benign group ( $p=0.016$ ); all patients with endometrial carcinoma had a thicker than 3 mm endometrial lining. Echogenic intrauterine fluid was also associated with the non-benign condition ( $p<0.01$ ). In multivariate analysis, all the significant variables were introduced including echogenic fluid, endometrial thickness, moderate to large amount of intrauterine fluid, endometrial texture and postmenopausal bleeding; however, the only significant risk factor for non-benign condition was demonstrated to be the presence of echogenic fluid. In conclusion, the authors recommended that postmenopausal women with endometrial echogenic fluid collection or with endometrial lining thicker than 3 mm should undergo endometrial sampling (14).

## Conclusion

Diagnosis of endometrial cancer should always be taken into consideration in postmenopausal women presenting with intrauterine fluid accumulation in association with endometrial lining thickening. Once the association of these signs is revealed, an endometrial sampling should be performed in order to orientate the diagnosis and to establish the most appropriate therapeutic strategy. In our case, performing a radical surgical approach consisting of total hysterectomy with bilateral adnexectomy, pelvic and para-aortic lymph node dissection provided a good oncologic outcome of the patient; at three years of follow-up, the patient remains free of any local or distant recurrence.

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*Received February 22, 2016*

*Revised March 30, 2016*

*Accepted March 31, 2016*