EJGO European Journal of Gynaecological Oncology

Serous endometrial intraepithelial carcinoma diagnosed by hysteroscopic transcervical resection

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Summary

Background: Serous endometrial intraepithelial carcinoma (SEIC) is very rare, and the diagnosis is made through hysterectomy in most cases. To the best of the present authors' knowledge, there is only three reported cases of SEIC diagnosed by hysteroscopic transcervical resection in the English language medical literature. *Case Report:* A 68-year-old woman presented with SEIC. The initial diagnosis was established by hysteroscopic transcervical resection and immunohistochemistry. The final diagnosis was established postoperatively by hysterectomy. To date, five months after operation, the patient is alive with no evidence of recurrence or metastasis. *Conclusion:* Hysteroscopic exam may be necessary in cases of patients with an abnormal cytology or histology of endometrium to detect SEIC.

Key words: Serous endometrial intraepithelial carcinoma; Hysteroscopic transcervical resection.

Introduction

Serous endometrial intraepithelial carcinoma (SEIC) has been described with many different names (i.e. minimal uterine serous cancer) since 1992 [1-7]. Although SEIC is considered as a precursor of uterine serous cancer (USC), SEIC has an aggressive behavior similar to USC [1-7]. Therefore, it is important to have an urgent diagnosis and appropriate treatment. In most of the SEIC cases, diagnosis is done postoperatively by hysterectomy, while there is only three reported case of SEIC diagnosed preoperatively by hysteroscopic transcervical resection in the English language medical literature [2, 4]. Here, the authors present a rare case of SEIC diagnosed by hysteroscopic transcervical resection preoperatively.

Case Report

A 68-year-old woman without a past medical history of interest was referred to this hospital due to an abnormal cytology of endmetrium. No symptoms were observed. Pelvic examination revealed an atrophic uterus. Ultrasonography and MRI examination of the pelvis, which demonstrated no abnormal findings such as endometrial thickness. Laboratory investigations showed no remarkable findings including serum tumor markers such as CA125. A fractional endometrial biopsy showed insufficient material. Therefore, the authors performed hysteroscopy, which showed very small tumor in uterine cavity near left tube (Figure 1). An endometrial biopsy showed mild nuclear atypia with a high nuclear/cytoplasmic ratio, but there was no clear evidence of malignancy such as SEIC, USC or endometrioid adenocarcinoma.

One month later, the authors performed hysteroscopic transcervical resection. Macroscopically, the tumor (size: 5×5 mm) was grey-white in color and solid (Figure 2). The pathological examination showed that the tumor was arranged in a background of atrophic endometrium. The tumor cells had clear cytoplasm and medium to large-sized atypical nuclei, and tumor lesion is limited to the epithelium, showing no stromal invasion (Figure 3). The tumor cells showed strong positivity by immunohistochemistry for p53, although Wilm's tumor gene-1 (WT-1) and estrogen receptor (ER) was weak positive to negative (Figure 3). Finally, the pathological examination showed a SEIC. Therefore, SEIC was initially considered the most likely diagnosis. One month later, the authors performed hysterectomy, bilateral salpingo-oophorectomy, and partial omentectomy. Macroscopically, there was no remaining tumor (Figure 4). The bilateral ovary and fallopian tube appeared to be normal. There was no intra-abdominal tumor dis-

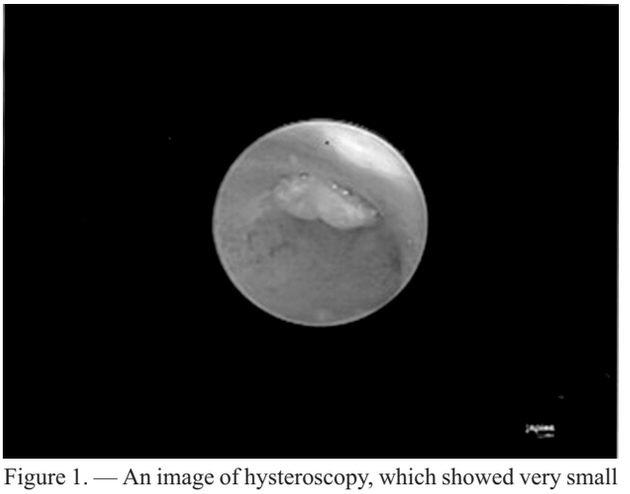

Figure 1. — An image of hysteroscopy, which showed very small tumor in uterine cavity near left tube.

Revised manuscript accepted for publication March 29, 2018

Eur. J. Gynaecol. Oncol. - ISSN: 0392-2936
XL, n. 5, 2019
doi: 10.12892/ejgo4645.2019

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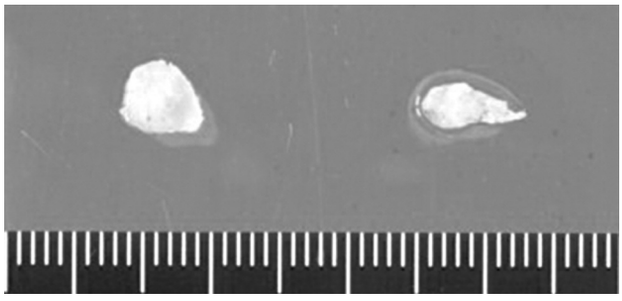

Figure 2. — The macroscopic image of resected specimen. The tumor (size: 5×5 mm) is grey-white in color and solid.

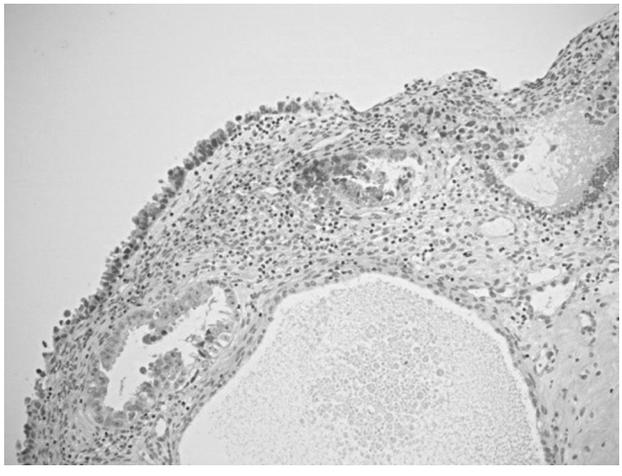

Figure 3A. — The microscopic image of tumor cells (Hematoxylin and Eosin, ×100), which showed clear cytoplasm and medium to large-sized nuclei.

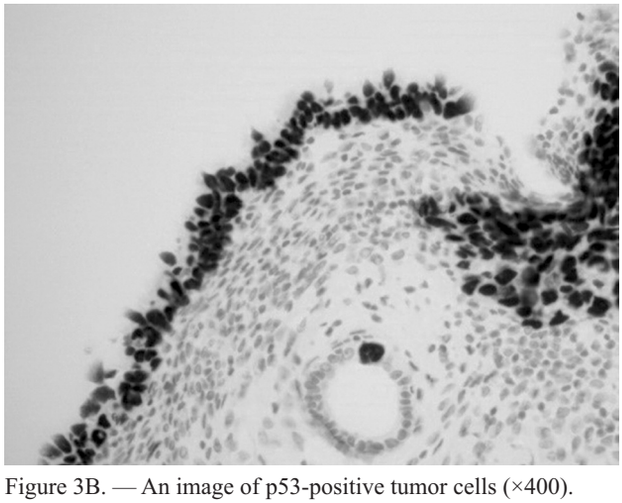

Figure 3B. — An image of p53-positive tumor cells (×400).

semination or ascites. The pathological examination and immunohistochemistry showed, the same tumor cells were arranged in a resected part of uterine body, and there was no stromal invasion or myometrial invasion by the tumor cells. There was no abnormal

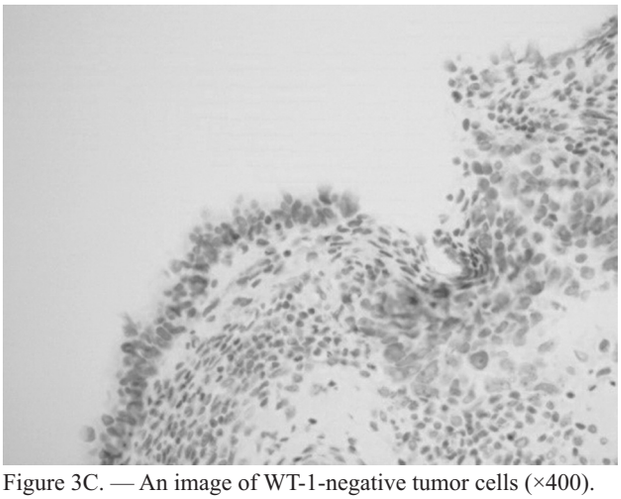

Figure 3C. — An image of WT-1-negative tumor cells (×400).

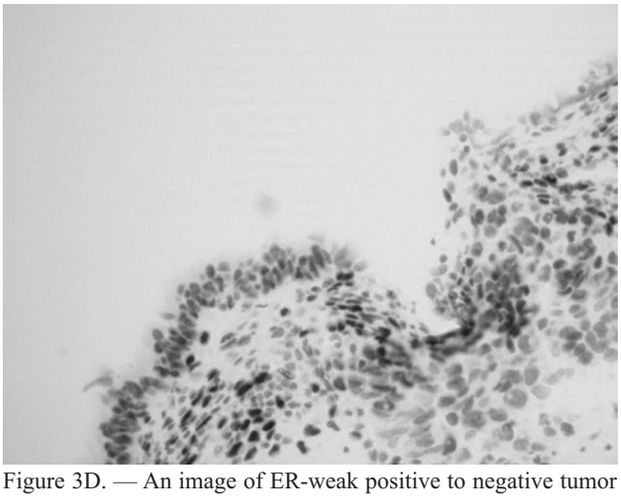

Figure 3D. — An image of ER-weak positive to negative tumor cells (×400).

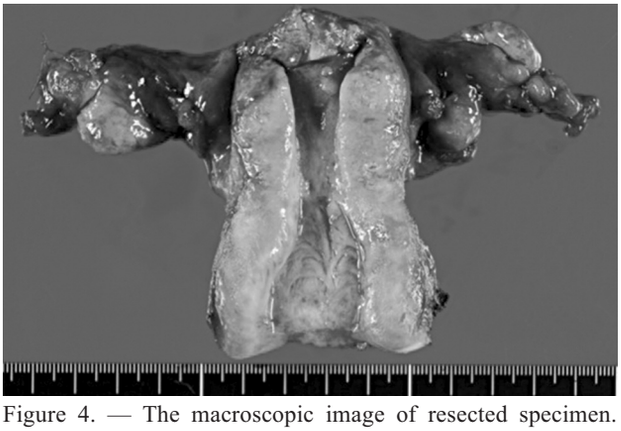

Figure 4. — The macroscopic image of resected specimen. Macroscopically, there is no remaining tumor, and bilateral ovary and fallopian tube appeared to be normal.

findings in ovary, fallopian tube, omentum, and ascites. Finally, the pathological examination showed a SEIC. The authors confirmed the diagnosis of SEIC. To date, five months after operation, the patient is alive with no evidence of recurrence or metastasis.

Discussion

SEIC has been described by many different names [1-7]. Although SEIC is considered as being the precursor of USC, SEIC also has an aggressive behavior similar to USC [1-7]. A significant number of patients could have distal metastasis at diagnosis, without symptoms [2-4]. SEIC is difficult to detect because the lesion is usually focal and small, and it forms a distinctive polyp occasionally [2, 3]. SEIC lesions have atypical endometrial glands with pseudostratification of the lining cells [3]. Therefore, it is important to have an accurate diagnosis and appropriate surgical staging.

The diagnosis of SEIC was established by immunohistochemistry. In particular, p53 gene mutation is important in the conversion of atrophic endometrium into SEIC, and p53 immunostaining is useful for differential diagnosis by confirming the presence of EIC on the endometrial surface and highlighting small tumor foci [3, 5, 6]. It has been also reported that the tumor cells characteristically show negative staining of ER [3, 5, 6]. The tumor cells showed strong positivity by immunohistochemistry for p53, and weak positive to negative for ER in the present case. Therefore, the authors confirmed the diagnosis of SEIC. In this case, the initial diagnosis was preoperatively established by hysteroscopic transcervical resection and immunohistochemistry. In most reported cases, the diagnosis is done postoperatively by hysterectomy without performing a preoperative hysteroscopic exam. To the best of the present authors' knowledge, there are only three reported cases of SEIC diagnosed preoperatively by hysteroscopic transcervical resection in the English language medical literature [2, 4]. Performing hysteroscopy or following hysteroscopic transcervical resection seemed to be an useful method for the diagnosis of SEIC.

The natural history of SEIC is unpredictable and there are no established treatment guidelines for this tumor [2-7]. Pathiraja *et al.* reported complete staging for the treatment of serous SEIC may be recommended. In most reported cases of SEIC, hysterectomy, and bilateral salpingo-oophorectomy without lymph node adenectomy were performed as operation methods. Currently there is no consensus on complete staging surgery including lymph node adenectomy in SEIC. In the present case, there was macroscopically no remaining tumor, and the bilateral ovary and fallopian tube appeared to be normal. There was no intra-abdominal tumor dissemination, ascites, or lymph node swelling. Therefore, lymph node adenectomy was not performed, considering side effects and complications. SEIC has extrauterine tumor spread in most of disease, and the omentum was frequently involved in most cases [4]. In the present case, partial omentectomy revealed no metastatic disease. Furthermore, there is no consensus on adjuvant therapy in SEIC [1-7]. Adjuvant chemotherapy is postoperatively conducted in some previous reports [3]. There is no reported case performing radiation therapy postoperatively as an adjuvant therapy. In the present case, adjuvant therapy was not performed. The role of adjuvant therapy remains unclear. However, there have been many reported cases of local recurrence and distant metastasis [1-7]. Therefore, patients with SEIC should be carefully monitored for the recurrence.

A variety of imaging methods and pathological methods including hysteroscopic exam or following hysteroscopic transcervical resection may be necessary in cases of patients with an abnormal cytology or histology of endometrium to detect SEIC. Urgent diagnosis and treatment of these patients seems to be critical.

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