

Case Report

Primary pure squamous cell carcinoma of the endometrium: a case report

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Abstract: Because primary pure squamous cell carcinoma (SCC) of the endometrium is very rare and its frequency is unknown, the author reviewed 142 archival hysterectomy specimens of endometrial cancers. As the results, one case of primary pure SCC was found. Thus, the frequency of SCC of the endometrium was 0.7% of all endometrial malignancies in our institution. The patient was a 72-year-old woman presenting with uterine bleeding. Uterine curettage biopsy and uterine discharge cytology revealed SCC. No malignancy was seen in cervical biopsy. Radical hysterectomy, bilateral salpingo-oophorectomy, omentectomy and lymph node dissection were performed. The endometrial carcinoma was an infiltrative polypoid tumor composed of non-keratinizing SCC with stratification and intercellular bridges. No adenocarcinoma element was recognized. The SCC cells were immunohistochemically positive for p53 protein and showed high Ki-67 antigen (labeling, 70%). The SCC was found to invade into the deeper third of the myometrium. No tumor cells were seen in other sites including the cervix, ovaries, omentum, and lymph nodes. The patients was FIGO stage IC (pT1C, NO, MO), and was treated with radiation and adjuvant chemotherapy. The patient is now alive without recurrence and metastasis 15 months after the operation.

Keywords: Endometrium, squamous cell carcinoma, histopathology

Introduction

Primary pure squamous cell carcinoma (SCC) is very rare. About 70 cases have been reported, according to WHO blue book [1]. It is defined as a primary carcinoma of the endometrium composed of squamous cells of varying degree of differentiation [1]. Recently, case reports of endometrial SCC have been sporadically published [2-11]. However, the frequency of SCC of the endometrium is unknown. The author herein investigated the frequency at our institution and reports a case of endometrial SCC.

Materials and methods

The author reviewed 142 archival hysterectomy specimens of endometrial malignancies in the last 10 years in our laboratory.

Results

Frequency

One case of pure SCC of the endometrium was found. Therefore, the frequency of endometrial

SCC was 0.7% of all endometrial malignancies in our institute.

Case report

A 72-year-old woman was admitted to our hospital because of severe uterine bleeding. Uterine curettage biopsy and uterine discharge cytology revealed SCC (**Figure 1A**). No malignancy was recognized in a cervical biopsy. Radical hysterectomy, bilateral salpingo-oophorectomy, omentectomy and 72 lymph nodes dissection were performed. Grossly, the endometrial carcinoma was infiltrative polypoid tumor measuring 6 x 5 x 4 cm (**Figure 1B**) in the corpus. Histologically, the tumor was composed of non-keratinizing SCC with stratification and intercellular bridges (**Figure 1C-E**). No adenocarcinoma element was recognized. Neither squamous metaplasia nor dysplasia was recognized. No ectopic cervical tissue was found. An immunohistochemical analysis was performed using Dako Envision method (Dako Corp., Glostrup, Denmark), as previously described [12-20]. The antibodies used were anti-p53 pro-

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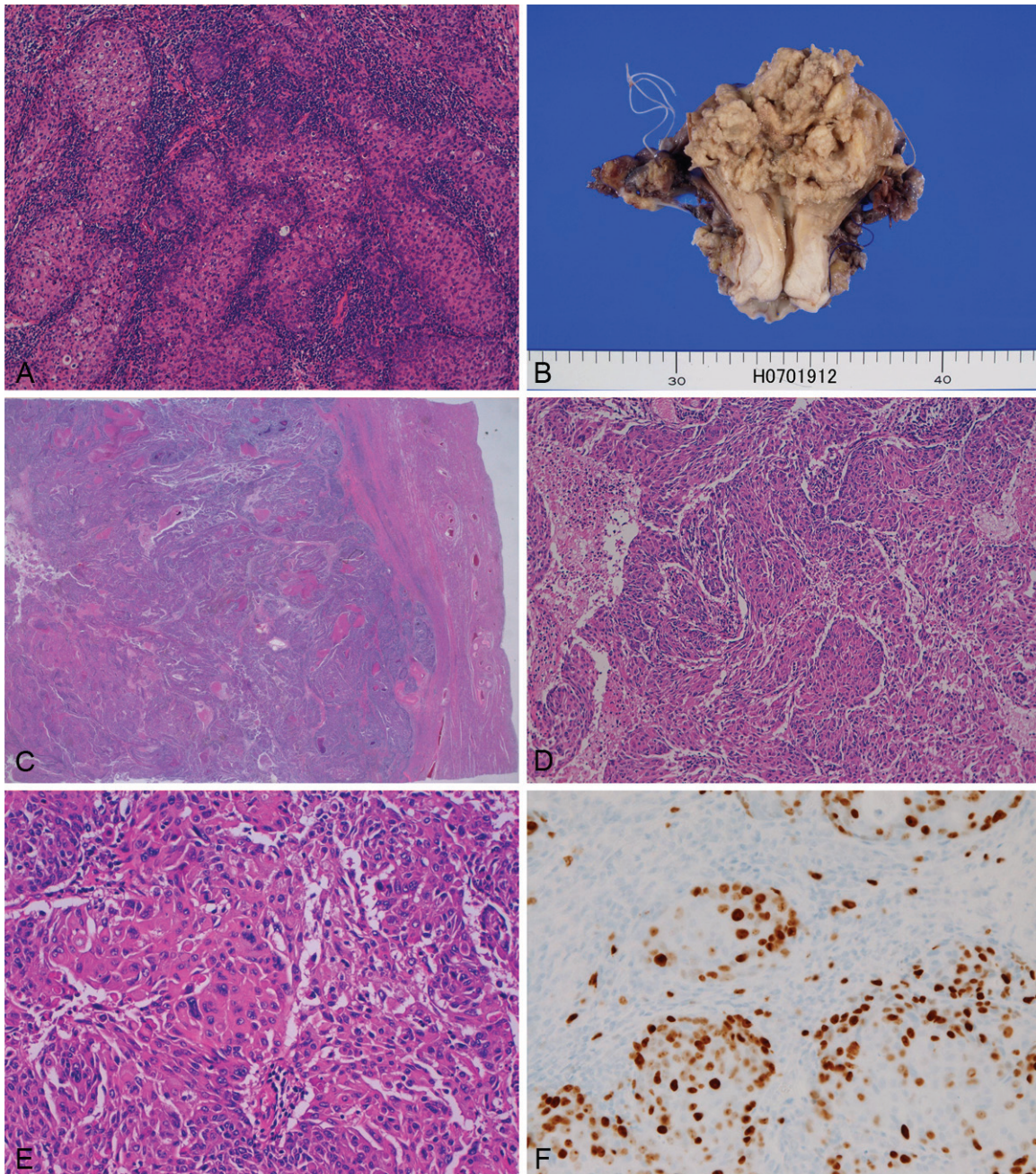


Figure 1. A: Endometrial biopsy specimen. Squamous cell carcinoma is recognized. HE, x100; B: Gross features. Polypoid tumor is present in the uterine corpus. C: Loupe figures of endometrial carcinoma. Squamous cell carcinoma (left) is seen to proliferate and invade into the myometrium (right). HE, x10; D: Histopathology of endometrial squamous cell carcinoma. HE, x100; E: Histopathology of endometrial squamous cell carcinoma. It shows proliferation of eosinophilic malignant squamous cells. Intercellular bridges are also recognized. HE, x200; F: Tumor cells are positive for p53 protein. Immunostaining, x200.

tein (DO-7, Dako) and anti-Ki-67 antibody (MIB-1, Dako). The SCC cells were immunohistochemically positive for p53 protein in 30% (Figure 1F), and showed high Ki-67 antigen (labeling, 70%). Examination of human papilloma virus (HPV) was not performed. The SCC

was found to invade into deeper one third of the myometrium (Figure 1B). No tumor cells were seen in other sites including the cervix, ovaries, omentum, and lymph nodes. The patient was FIGO stage IC (pT1C, N0, M0), and was treated with radiation and adjuvant chemotherapy. The

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patient is now alive without recurrence and metastasis 15 months after the operation.

Discussion

In primary SCC of the endometrium, exclusion of cervical SCC extension and squamous differentiation of endometrioid carcinoma is necessary [1]. The present case was pure SCC of the endometrium. The uterine cervix was free of tumors. There was no endometrioid adenocarcinoma element in the present tumor. Thus, the present case fulfills the criteria of primary SCC of the endometrium [1].

The frequency of primary SCC of the endometrium is unknown. In the present study, the frequency of primary SCC of the endometrium was 0.7% (1/142) of all endometrial malignancies. However, this frequency is an estimated value in a single institution. More studies using larger series are required to determine the incidence.

Primary SCC of the endometrium has been reported to show poorer prognosis than endometrioid carcinoma [1, 3, 5]. The prognosis depends mainly on tumor stage. The present case was FIGO stage IC, was treated with post-operative radiation and adjuvant chemotherapy, and now alive without recurrence or metastasis 15 months after the operation.

P53 protein expression is reported to be present in primary SCC of the endometrium [9]. However, there is a report that p53 mutation is absent in primary SCC of the endometrium [6]. In the present study, p53 expression was present in 30% of carcinoma cells, suggesting that p53 gene mutation is present in primary SCC of the endometrium. In the present case, the Ki-67 labeling was very high (70%). These observations demonstrate the malignant nature of the present case.

The pathogenesis of primary SCC of the endometrium is unknown. Several possibilities exist. First, the SCC is a complete malignant squamous differentiation of endometrioid adenocarcinoma. Second, HPV is involved in the pathogenesis of primary SCC of the endometrium [4, 6]. Thirdly, squamous metaplasia-dysplasia-SCC sequence is involved in the pathogenesis of primary SCC of the endometrium [8]. Finally, primary SCC of the endometrium may develop from ectopic cervical tissue in the endometrium [2]. In the present study, there was no ecto-

pic cervical tissue, squamous metaplasia, or dysplasia. HPV was not investigated in the present study. Much more studies are required to determine the pathogenesis of primary SCC of the endometrium.

In summary, the author reports frequency of primary SCC of the endometrium, and reported a case of primary SCC of the endometrium.

Conflict of interest statement

The author has no conflict of interest.

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