

Primary Squamous Cell Carcinoma of the Endometrium: A Case Report

Hiroaki KASE, Shoji KODAMA, Ikunosuke TSUNEKI, Norio YOSHIYA and Kenichi TANAKA

Department of Obstetrics and Gynecology, Niigata University School of Medicine, Niigata, Japan

Received April 4 1997; accepted July 7 1997

Summary. A 53-year-old woman exhibited an endometrial squamous cell carcinoma (ESCC). There was a large mass in the corpus. The residual normal endometrial gland adjacent to ESCC showed no metaplasia. We may consider this case as carcinogenesis from pluripotential stem cells.

Key words—squamous cell carcinoma, endometrium, histogenesis.

INTRODUCTION

Primary squamous cell carcinoma of the endometrium (ESCC) is exceedingly rare. In 1928, Fluhman¹ proposed the following criteria for diagnosis: 1) no coexisting endometrial adenocarcinoma; 2) no connection with the squamous epithelium of the cervix; and 3) no cervical squamous carcinoma. The World Health Organization (WHO)² has extended Fluhman's criteria to include clear evidence of squamous differentiation such as intercellular bridges and/or keratin.

CASE REPORT

The patient was a 53-year-old woman gravida 5, para 2 with menopause at the age of 51. There was nothing of significance in her family history. In September 1995 she was referred to our hospital for postmenopausal bleeding. An endometrial smear demonstrated malignant cells.

Gynecological examination revealed a normal uter-

ine cervix and corpus. No adnexal masses were palpable. Colposcopy showed no abnormal findings. MRI and pelvic ultrasound detected a mass (4.0 × 4.0 cm) at the right posterior wall of the uterine corpus and indicated normal findings with the uterine cervix. An endocervical smear and a biopsy gave negative results, but an endometrial biopsy disclosed squamous cell carcinoma (SCC). The tumor marker showed a slightly elevated serum level of SCC antigen, 2.6 ng/ml (normal, <1.5 ng/ml). Thus, we diagnosed endometrial cancer stage IB or IC.

A total abdominal hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy, and paraaortic lymphadenectomy was performed. The postoperative serum level of SCC antigen was normal. Postoperative adjuvant combination chemotherapy was performed using cisplatin, vinblastine and peplomycin (PVP) for 3 courses. She was discharged in February 1996. She has been treated with Tegafur/Uracil and has remained free of disease.

PATHOLOGIC STUDY

The uterus weighted 190 g and had a smooth cervical surface, with a patent os canal. There was a large mass measuring 4.5 × 4.0 × 3.8 cm on the right posterior wall of the corpus. We examined 45 sections of the uterus. Histopathological examination showed an infiltrative lesion composed of keratinizing squamous cell carcinoma with intercellular bridges (Fig. 1). The ESCC penetrated near the uterine corpus serosa. The residual normal endometrial gland was adjacent to ESCC, in which metaplasia and hyperplasia were not observed (Fig. 2). However, under this lesion, the ESCC deeply invaded near the serosa. There was no evidence of adenocarcinoma. There was no squamous metaplasia, heterotopic cervical tissue, nor normal

Correspondence: Hiroaki Kase, MD, Department of Obstetrics and Gynecology, Niigata University School of Medicine, 1-757 Asahimachi-dori, Niigata 951, Japan.

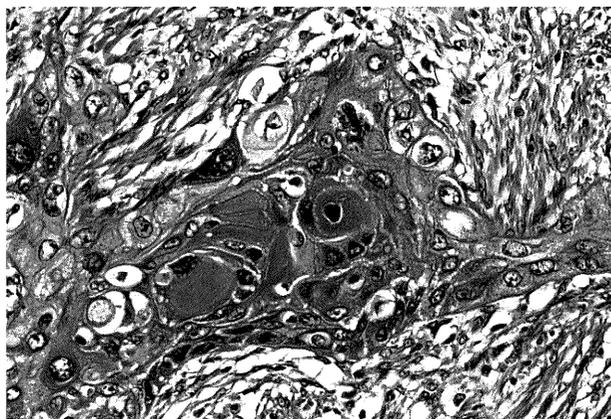


Fig. 1. An infiltrative lesion composed of keratinizing squamous cell carcinoma. HE. $\times 100$

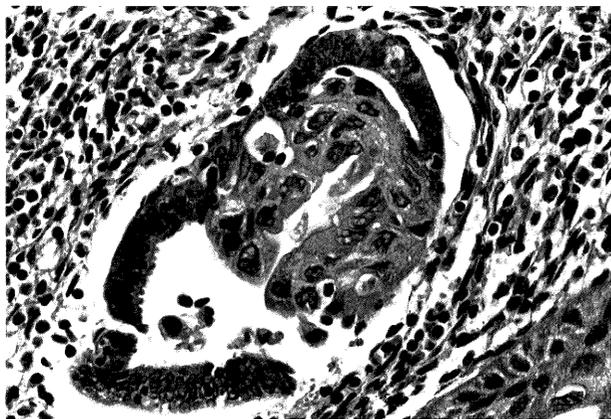


Fig. 2. The residual normal endometrial gland appears adjacent to endometrial squamous cell carcinoma. No regions of metaplasia, reserve cell and heterotopic cervical tissue are observed. HE. $\times 100$

squamous epithelium in the uterine corpus. The lymphovascular space invasion was seen. The lesion did not invade the tube or the cervix. Pelvic and paraaortic lymph nodes were not metastasized. Periodic acid Schiff stain gave positive results.

DISCUSSION

The pathogenesis of ESCCs has been explained by three theories. The squamous metaplasia theory, which has been described by several investigators,^{3,4,5} proposes that squamous metaplasia in the endometrium is a precursor to invasive carcinoma. It is based on observations of its coexistence with meta-

plasia. Squamous metaplasia may develop from several factors: chronic infection, chronic eversion of the uterus, pyometra, cervical stenosis, vitamin A deficiency and instillation of various chemicals into the uterus, estrogen deficiency or excess, tuberculosis, syphilis, irradiation and foreign bodies (including intra-uterine devices).

The vertical field theory^{6,7} implies a local mechanism within the uterine corpus arising from an abnormal population of pluripotential stem cells ("reserve cells") adjacent to the basement membrane. They grow both radially, to eventually replace normal endometrium by neoplasia, and vertically, to invade the myometrium.

Finally, in 1995 Yamamoto et al.⁸) suggested that some ESCCs may arise in heterotopic cervical tissue. They described mature stratified squamous epithelium associated with mucinous glands in the endometrium, in which epithelium and glands were identical to those of the uterine cervix and were more likely to be heterotopic rather than metaplastic.

In the present case, the ESCC was close to the normal endometrial gland. Also, in this lesion, no sequential changes such as metaplasia were observed. In addition, this lesion had properties of adenomatous tissue because of the results of immunohistochemistry: both the keratin 19 antibody and the anti-secretory component antibody which react with the glandular epithelium were positive in this lesion. We may therefore consider this case as carcinogenesis from pluripotential stem cells.

REFERENCES

- 1) Fluhmann CF: Squamous epithelium in the endometrium in benign and malignant conditions. *Surg Gynecol Obstet* **46**: 309-318, 1928.
- 2) Paulsen H, Taylor C: International histological classification of tumors, No. 13; Histological typing of female genital tract tumors, No. 13, World Health Organization, Geneva, 1975.
- 3) Pritzker J, Anselmo MT, Veridiano NP, Tancer ML: Squamous cell carcinoma of the endometrium. A case report. *J Reprod Med* **37**: 194-198, 1992.
- 4) Radhika S, Dey PW, Muss HB, Norris HJ: Corpus: Epithelial tumors. In: Hoskins WJ, Perez CA, Young RC (ed) Principles and practice of gynecologic oncology. Lippincott, Philadelphia 1992, p 674-678.
- 5) Seltzer VL, Klein M, Beckman EM: The occurrence of squamous metaplasia as a precursor of squamous cell carcinoma of the endometrium. *Obstet Gynecol* **49**: 34-37, 1977.
- 6) Baggish MS, Woodruff JD: The occurrence of squamous epithelium. *Obstet Gynecol Surv* **22**: 69-115, 1967.

- 7) Teixeira M, Teixeira F, Pardal-de Oliveira F: Squamous-cell carcinoma of the endometrium and cervix. *Int J Gynecol Obstet* **35**: 169-173, 1991.
- 8) Yamamoto Y, Izumi K, Otsuka H, Kishi Y, Mimura

T, Okitsu O: Primary squamous cell carcinoma of the endometrium: A case report and a suggestion of new histogenesis. *Int J Gynecol Pathol* **14**: 75-80, 1995.