



Primary Squamous Cell Carcinoma of the Endometrium : A Rare Case in the Philippines

Doris R Benavides^{1*}, Alan T Koa²

¹Department of Obstetrics and Gynecology, Victor R Potenciano Medical Center, Metro Manila, Philippines

²Department of Pathology, Victor R Potenciano Medical Center, Metro Manila, Philippines

Correspondence to: Doris R Benavides, Department of Obstetrics and Gynecology, R Potenciano Medical Center, Metro Manila, Philippines.

Received date: July 13, 2020; **Accepted date:** July 21, 2020; **Published date:** July 24, 2020

Citation: Benavides DR, Koa AT (2020) Primary Squamous Cell Carcinoma of the Endometrium : A Rare Case in the Philippines. J Obst Gynecol Surg. 1(2): pp. 1-4.

Copyright: ©2020 Benavides DR, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

ABSTRACT

Introduction: Primary Squamous Cell Carcinoma of the Endometrium (PSCCE) is an extremely rare case accounting for only 0.1% of all endometrial cancer cases. It usually occurs in post-menopausal women.

Case: We reported a case in the Philippines, a 64-year-old, multiparous, post-menopausal woman who presented with post-menopausal bleeding.

Procedure: Endometrial curettage showed squamous cell carcinoma. She then underwent Exploratory Laparotomy, Radical Hysterectomy with Bilateral Salpingo-oophorectomy, with Bilateral Pelvic Lymph Node Dissection and Peritoneal Fluid Cytology.

Results: Histopathology of the uterus showed squamous cell carcinoma, keratinizing, with full thickness myometrial invasion. Postoperative diagnosis was primary squamous cell carcinoma, keratinizing, endometrium, stage IIIA. Patient was advised to undergo chemotherapy and radiotherapy.

Conclusion: The etiology of PSCCE is still unclear and usually presents with vaginal bleeding in post-menopausal women. To diagnose, histology should meet three criteria as defined by Fluhmann. The prognosis is poor and related to stage at diagnosis.

Keywords:

Primary Squamous Cell Carcinoma of the Endometrium, Post-menopausal bleeding, Fluhmann criteria, Poor prognosis.

Introduction

Primary Squamous Cell Carcinoma of the Endometrium (PSCCE) is extremely rare accounting for only 0.1% of all endometrial cancer cases [1-6]. It usually occurs in postmenopausal women. The majority of Squamous Cell Carcinoma (SCC) originates as an extension from the cervix [3,6], where SCC spreads superficially to the inner surface of the uterus and replaces the endometrium with carcinoma cells.

Case Report

This is a case of Philippines, 64-year-old, Filipino, multiparous, menopause for 14 years, who presented with post-menopausal

bleeding for the past two and half months. She consulted and a transvaginal ultrasound was done with findings of normal sized uterus, thickened endometrium for menopausal age (0.8 cm), non-visualized ovaries. Pap-smear showed High-grade Squamous Intraepithelial Lesion (HSIL). Endometrial biopsy was subsequently done which showed severe dysplasia, fragments of squamous epithelium, involving the full thickness of the epithelium. No endometrial tissues noted (Figure 1).

The patient was referred to a Gynecologic Oncologist. Colposcopy was done with negative findings. Cervical Punch Biopsy showed focal Low-grade Squamous Intraepithelial Lesion (LSIL) (Figure 2).

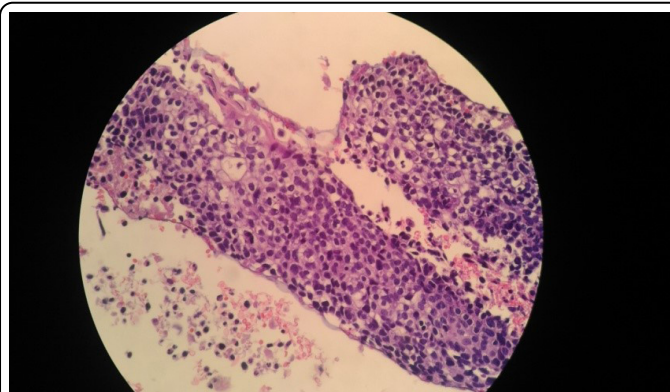


Figure 1: Endometrial Biopsy: Severe dysplasia, fragments of squamous epithelium, involving the full thickness of the epithelium. No endometrial tissues noted.

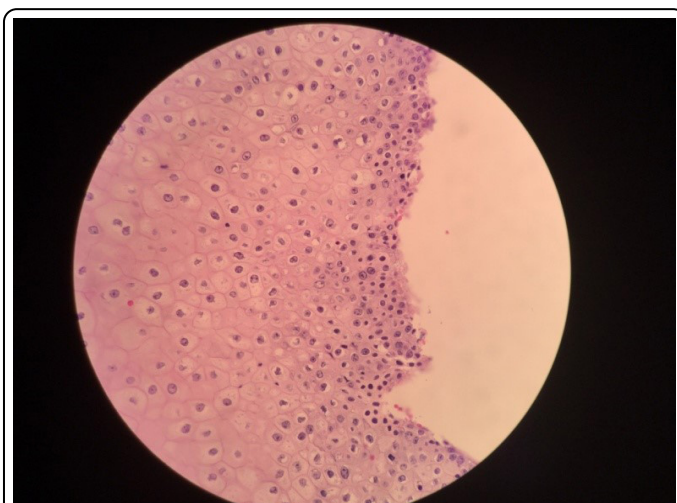


Figure 2: Cervical Punch Biopsy: Focal Low-grade Squamous Intraepithelial Lesion (LSIL).

The patient was advised to undergo Loop Electrical Excision Procedure (LEEP) or conization, but the patient declined and opted to observe her condition.

During the interim patient was asymptomatic, until two weeks prior to admission, patient experienced post-menopausal bleeding. She underwent Diagnostic Dilatation and Curettage (D&C) with histopathology findings of squamous cell carcinoma, keratinizing (Figures 3-5).

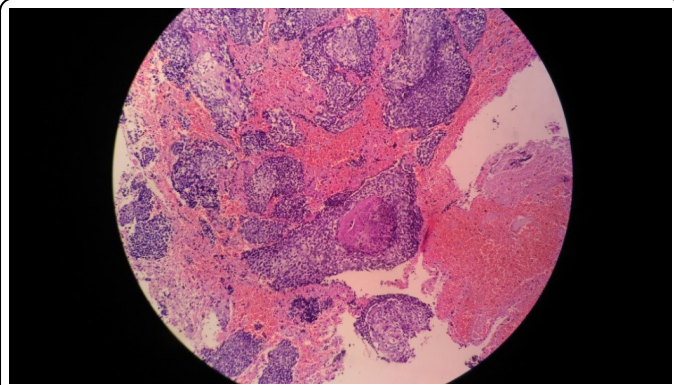


Figure 3: Histopathology of Diagnostic D and C.

A malignant epithelial neoplasm composed of sheets of squamous cells with pleomorphic round to ovoid, vesicular to hyperchromic nuclei and occasionally prominent nucleoli. The cytoplasm is ample and eosinophilic to focally clear. Mitotic figures and areas with keratinization are seen. The background shows low-grade and high-grade squamous intraepithelial

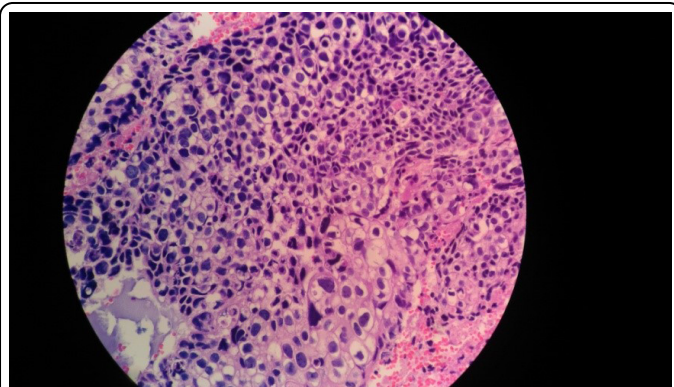


Figure 4: Histopathology of Diagnostic D&C (high power): sheets of squamous cells with pleomorphic round to ovoid, hyperchromic nuclei and occasionally prominent nucleoli.

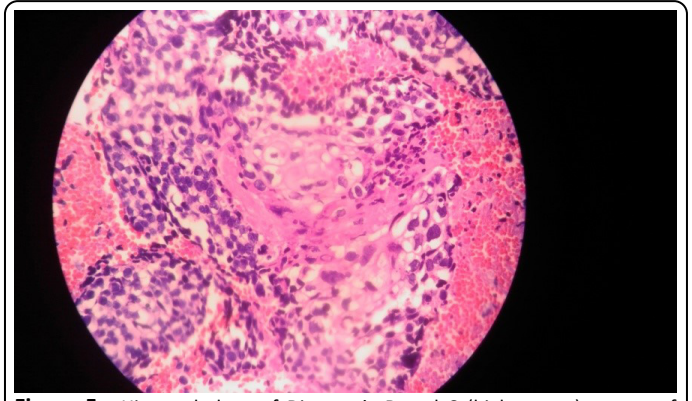


Figure 5: Histopathology of Diagnostic D and C (high power) : areas of keratinization.

lesion.

Patient was referred again to a Gynecologic Oncologist for co-management. Whole abdomen CT Scan with contrast was done which revealed right adnexal mass 6.56 x 5.96 x 6.7 cm, consider dermoid cyst. Enlarged uterus 10.22 x 5.5 x 7 cm with hydrometra and inhomogenous parenchymal attenuation. No enlarged abdominal lymph nodes noted.

On internal examination, vagina was smooth, cervix is 2.5 x 2.5 cm, firm, closed, nodular at the area of the endocervix. On bi-manual examination, uterus is slightly enlarged. There is a fluctuant, regularly shaped movable mass at the right adnexa measuring approximately 8 x 6 cm. Recto-vaginal examination was unremarkable with smooth and pliable bilateral parametria. Admitting impression was squamous cell carcinoma, keratinizing, cervix, stage IA2. She underwent Exploratory Laparotomy, Radical Hysterectomy with Bilateral Salpingo-oophorectomy with Bilateral Pelvic Lymph Node Dissection and Peritoneal Fluid Cytology.

Intraoperative findings revealed the cervix is smooth with no gross lesions. The uterus is firm, tan, irregularly shaped, measuring 7 x 5 cm with focal ulceration approximately 2 x 2 cm at the fundal serosa and anterior aspect. On cut section of the uterus there is an irregularly shaped, dark brown, rubbery tissue at the fundus measuring 2 x 2 x 0.3 cm. The myometrium at the posterior uterine wall was nodular at the area of serosal induration. The right ovary is converted to a cystic structure containing sebum and hair on cut section. The vaginal cuff measured 1.5 cm long circumferentially and was smooth with

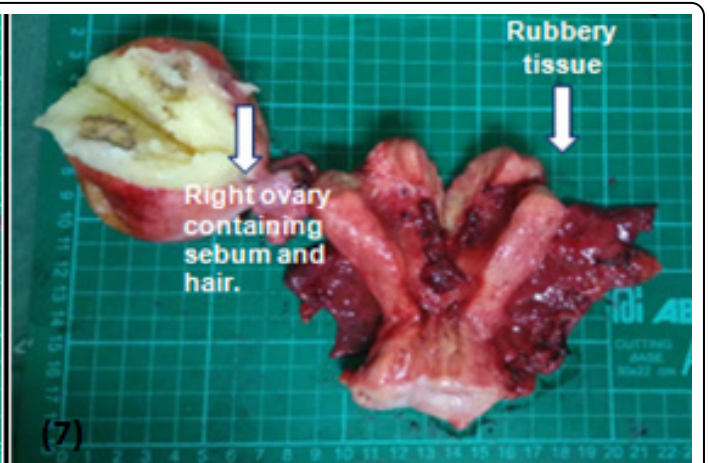


Figure 6 and 7: The uterus shows focal ulceration approximately 2 x 2 cm at the fundal serosa and anterior aspect. The right ovary is cystic containing sebum and hair. The cervix is smooth with no gross lesions. The uterus shows an irregularly shaped, dark brown, rubbery tissue at the fundus measuring 2 x 2 x 0.3 cm.

no gross lesion (Figures 6-8).

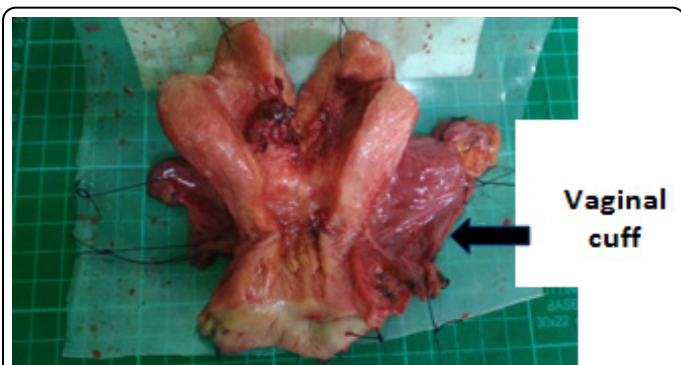


Figure 8: The vaginal cuff was smooth with no gross lesion.

Histopathology findings include (Figures 9-11) squamous cell carcinoma, keratinizing, with full thickness myometrial invasion of the uterus. The cervix shows low grade squamous intraepithelial lesion and chronic cervicitis with nabothian cysts

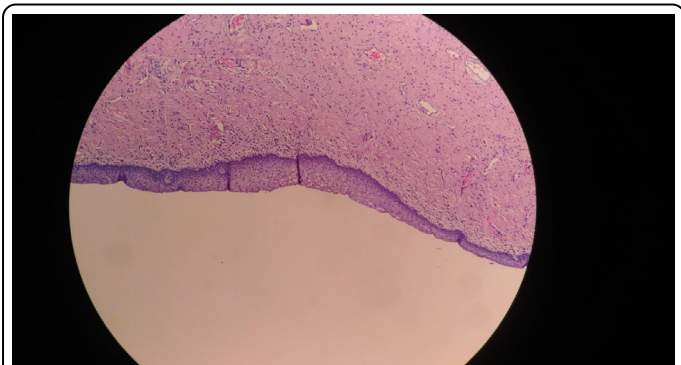


Figure 9: Cervix shows koilocytotic atypia of the ectocervical epithelium and lymphoplasmacytic infiltrates in the stroma.

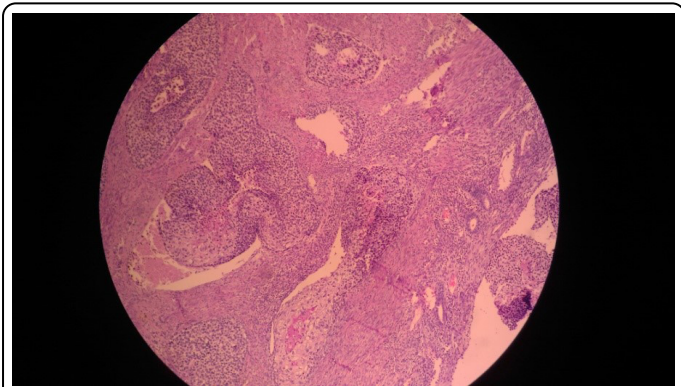


Figure 10: Malignant squamous cells infiltrates the full thickness of the myometrium and appears to be within lymphatic spaces.

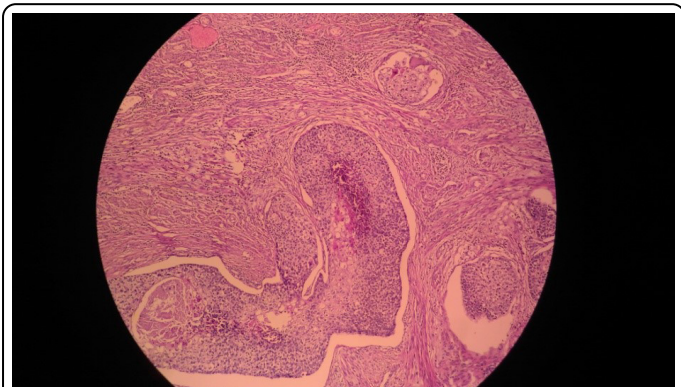


Figure 11: The tumor infiltrates the full thickness of the myometrium and appears to be within lymphatic spaces.

and focal squamous metaplasia. The right ovary reveals mature cystic teratoma. The vaginal cuff and bilateral parametria are negative for tumor. Lymphovascular space invasion is observed.

The Pathology report does not mention a concurrent endometrial adenocarcinoma. The squamous cell carcinoma of the endometrium does not show connection with the squamous epithelium of the cervix. There is absence of cervical squamous cell carcinoma. Final diagnosis was primary squamous cell carcinoma, keratinizing, endometrium, stage IIIA; mature cystic teratoma, right ovary.

The patient was advised to undergo chemotherapy and radiotherapy but she opted to seek a second opinion with another Gynecologic Oncologist.

Discussion

Less than 100 cases of primary squamous cell carcinoma of the endometrium (PSCCE) have been reported world wide [1]. First reported case was made by Gebhard in 1892 [6,7]. Literature search reveals no local data published in the Philippines. This occurs in postmenopausal women with a mean age of 67 years old [2].

Primary squamous cell carcinoma of the endometrium has an unclear pathogenesis [6] and unclear etiology [7]. There are several theories regarding the cellular origin of primary squamous cell carcinoma of the endometrium.

The following have been proposed [6]:

- Reserve or stem cells located between the glandular basement membrane and the endometrial columnar cell layer
- Squamous metaplasia of the normal endometrium
- Heterotopic cervical tissue

Some literatures have reported that vitamin A deficiency, anti-estrogen treatment, pyometra, chronic infection, uterine prolapse, myoma, intrauterine device, history of pelvic irradiation and curettage, cervical stenosis, nulliparity are strongly associated with squamous metaplasia of the endometrium [2,4,5,9]. These are not present in our patient. The most common clinical manifestation is abnormal uterine bleeding [4], which is present in our patient.

Diagnosis cannot be firmly established until a hysterectomy is performed due to the need to confirm the 3 criteria of histopathology result which were established by Fluhmann in 1928 to diagnose PSCCE [9]. The 3 criteria include [6,9]: no co-existing adenocarcinoma of the endometrium; no connection between the tumor in the endometrium and cervical squamous epithelium; no co-existence of primary squamous cell carcinoma of the cervix with PSCCE. In our case, the histopathologic findings met those 3 criteria.

Gross findings in PESCC is usually an infiltrative polypoid tumor [4]. Microscopically, squamous cell carcinoma of the endometrium resembles that of the cervix. It is quite difficult to diagnose with certainty based on endometrial curettings alone. It is particularly important to rule out an alternate possibility of extension from cervical carcinoma. The tumor may also arise from ichthyosis uteri, a condition in which the endometrium is replaced by keratinized squamous epithelium [5]. Occasionally, squamous carcinoma of the cervix has been known to spread upward along the surface of the endometrium into the fallopian

tubes. Some cases have developed in elderly patients with pyometra, presumably on the basis of a pre-existing endometrial squamous metaplasia.

Staging of PSCCE is similar to staging of all the other histologic types of endometrial cancer. Based on FIGO staging 2009, the patient is stage IIIA squamous cell carcinoma of the endometrium, with the endometrial tumor invading the serosa of the uterine corpus.

Total hysterectomy with bilateral salpingo-oophorectomy with post-operative chemotherapy with Carboplatin and Paclitaxel every 21 days for 6 cycles and External Beam Radiotherapy is recommended treatment for menopausal women [6]. One case reported their 2 patients underwent radical surgery and received external beam radiation followed by vaginal brachytherapy have obtained good clinical result [12]. Our patient was counselled regarding post-operative therapy and prognosis but she opted to seek second opinion with another Gynecologic Oncologist.

Primary Squamous Cell Carcinoma of the Endometrium has a high malignancy grade and prognosis is poor¹ with a 5-year survival rate of zero [7]. PESCCE has been reported to have a poorer prognosis than endometrioid carcinoma, relating to surgical staging [10]. In a review of the reported cases, 80% of stage I patients survived whereas survival of stage III patients was only 20% and none with stage IV. Prognosis in our patient is less if she refuses post-operative treatment.

Conclusion

Primary squamous cell carcinoma of the endometrium is an extremely rare type of endometrial carcinoma. The etiology is still unclear and usually presents with vaginal bleeding in post-menopausal women. To diagnose PSCCE, histology should meet 3 criteria as defined by Fluhmann. Treatment includes surgical hysterectomy with adnexectomy, chemotherapy and radiotherapy, however prognosis is poor.

Conflict of Interest:

A well-informed and documented consent was obtained from the patient for publication of her case. All attending physicians of the patient were also well-informed and agreed to publish

this case and declared no conflicts of interest.

References

1. Williams Gynecology Textbook. 2nd edition. Chapter 33: 827.
2. Blaustein's Pathology of the Female Genital Tract. 6th edition. Chapter 9: 439.
3. Kurman RJ, International Agency for Research on Cancer, World Health Organization WHO (2014) Classification of Tumours of Female Reproductive Organs.
4. Pathology of Female Genital Tract. (2016) Department of Pathology University of Santo Tomas.
5. Jacob KJ, Deepak AV, Saleema Padupingal (2016) Squamous Cell Carcinoma Endometrium. Journal of Case Reports 6(1): pp. 73-76.
6. Lee SJ, Choi HJ (2012) Primary Endometrial Squamous Cell Carcinoma: A Case Report and Review of Relevant Literature on Korean Women. J Pathol 2012; 46(4): pp. 395-398.
7. Wu Q, Chu Z, Han H, et al. (2018) Primary squamous cell carcinoma of the endometrium in a woman of reproductive age: a rare case report. J Int Med Res. 46(8): pp. 3417-3421.
8. Harvey Cove. Surgical Pathology of the Endometrium. Division of Surgical Pathology Center, University of California at Los Angeles. p.152
9. Fluhmann CF (1953) The histogenesis of squamous cell metaplasia of the cervix and endometrium. Surg Gynecol Obstet. 97(1): pp. 45-58.
10. Jetley S, Jairajpuri ZS, Hassan MJ, et al. (2015) Primary Endometrial Squamous Cell Carcinoma In Situ, report of a rare disease. Sultan Qaboos Univ Med J. 15(4): pp. e559-e562.
11. Bagga PK, Jaswal TS, Datta U, et al. (2008) Primary endometrial squamous cell carcinoma with extensive squamous metaplasia and dysplasia. Indian J Pathol Microbiol. 51(2): pp. 267-268.
12. Zhang C, Zhang H, Yang L, et al. (2018) Primary squamous cell carcinoma of the endometrium in a woman of perimenopausal age: A case report. Medicine (Baltimore). 97(48): e13418.