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Cervical Choriocarcinoma in a Patient with no Previous History of Pregnancy and Histopathological Diagnosis: A Case Report

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Abstract

Choriocarcinomas are considered to be the most malignant gestational trophoblastic cancers. This neoplasia might occur due to a malignant transformation following molar pregnancies, abortions, or normal or ectopic pregnancies. Primary cervical choriocarcinomas are particularly rare conditions. In the present study, we report the case of cervical choriocarcinoma in a 43-year-old woman without previous pregnancy history. She was transferred to our hospital and presented with profuse and abnormal vaginal bleeding. Transvaginal ultrasound scan identified a 5 cm cervical mass, from which a biopsy sample was collected. Rapid pathologic findings suggested the tissue in the mass to be villi, but not adenocarcinoma or squamous cell carcinoma. Serum β-human chorionic gonadotropin (β- hCG) concentration was found to 71520 mIU/mL. These results indicated the possibility of a cervical pregnancy or a gestational trophoblastic disease. Subsequently, a total hysterectomy was performed due to the life-threating bleeding condition. The postoperative diagnosis was stage I cervical choriocarcinoma. Chemotherapy was administered due to the elevated risk of recurrence according to the international federation of gynecology and obstetrics (FIGO) risk scoring system. Taking this case into consideration, cervical choriocarcinomas should be included in the differential diagnosis of irregular vaginal bleeding, augmented β-hCG levels, even in cases of negative history for previous of pregnancy.

Keywords: Cervical tumor, Choriocarcinoma, Previous pregnancy, Immunohistochemistry

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Introduction

Choriocarcinomas are the most malignant form among the gestational trophoblastic diseases and present varying incidence that increase in patients older than 40 years[10]. This neoplasia usually occurs due to malignant transformations following a molar pregnancy, but rarely after abortions or ectopic pregnancies[2,6]. Here, we report a case of a histopathologically diagnosed cervical choriocarcinoma in which the patient did not present history of previous pregnancies.

Case Presentation

A 43-year-old woman who experienced menarche at the age of 12 and presented 35-day menstrual cycles, presented with a minor bloody discharge following normal menstruation, which is about six weeks before. She had gone a medical examination at a hospital which revealed the presence of a uterine myoma (Figure 1a and b) and an atypical squamous cell of undetermined significance (ASC-US). Since the patient was positive for human papillomavirus, a cervical biopsy was advised at the previous hospital. However, it resulted in a profuse abnormal vaginal bleeding and required for the patient to be transferred to our hospital. As shown in Figure 1c, there was a massive active bleeding from the external cervix. Transvaginal ultrasound scanning detected a mass of approximately 5 x 3 cm in the cervical canal. The cervical tumor was biopsied and subjected to urgent pathological analysis

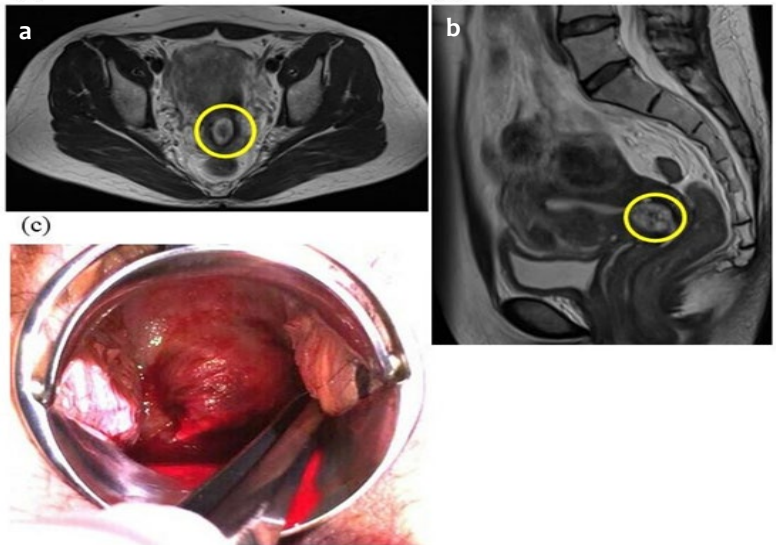
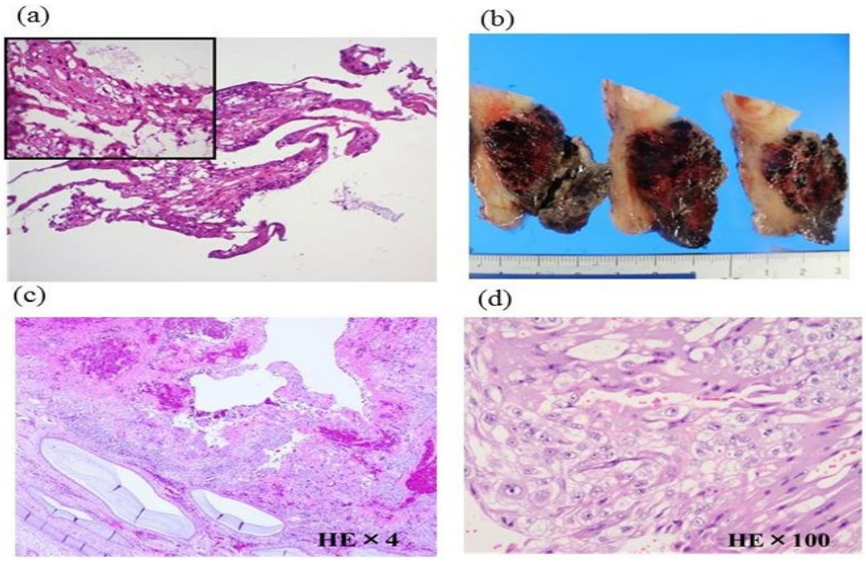


Figure 1: A medical examination by magnetic resonance imaging (MRI) scans at a hospital revealed the presence of a uterine myoma (Figure 1a and b). There was a massive active bleeding from the external cervix (Figure 1c).

The histopathological characteristics of the sample evidenced the presence of villous-like and decidual-like structures, but not typical of adenocarcinoma or squamous cell carcinoma cells (Figure 2a). These results indicated the possibility of a trophoblast-derived tumor. Thus, cervical pregnancy should be also suspected from the findings. A pregnancy test was performed indicating positivity. The serum concentration of β-human chorionic gonadotropin (β-hCG) was 71520 mIU/mL. These findings allowed to consider the possibility of cervical pregnancy or trophoblast-derived chorionic diseases.

The hemoglobin (Hb) levels decreased from 9.3 g/dL to 5.3 g/dL, due to the active bleeding from the cervical tumor and the estimated bleeding volume was of 2100 mL. A life-saving emergency total abdominal hysterectomy surgery was performed instead of the uterine artery embolization (UAE), considering the patient had no future desire for fertility.

The maximum length of the cervical mass was approximately 7 cm (Figure 2b). The pathological analysis found the proliferation of sheet-like trophoblastic cells with a relatively high degree of nuclear atypia (Figures 2c and d). Upon immunostaining, tumor cells exhibited extensive positivity for human chorionic gonadotropin (HCG) and Ki-67 (Figure 2e and f).



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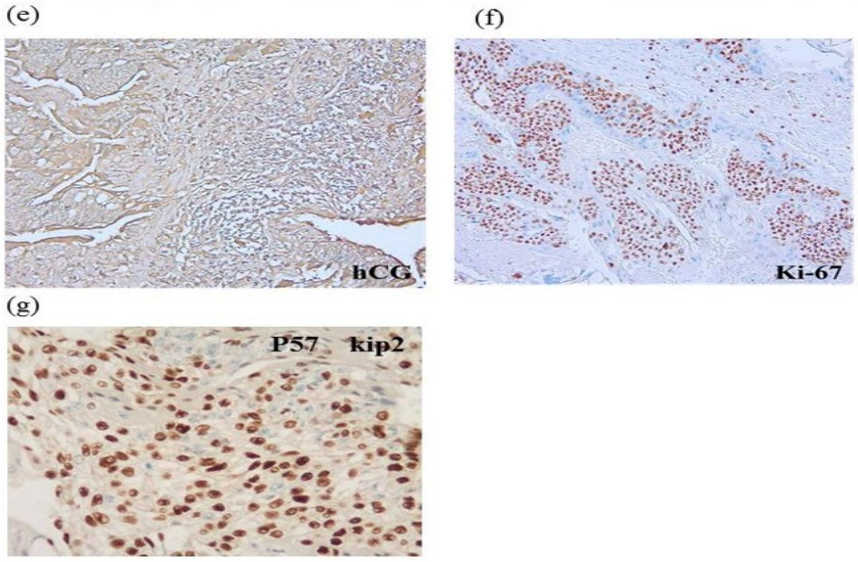

Figure 2: Pathologic finding. Rapid pathologic findings suggested the tissue in the mass to be villi, but not adenocarcinoma or squamous cell carcinoma (Figure 2a). The maximum length of the cervical mass was approximately 7 cm (Figure 2d). The pathological analysis found the proliferation of sheet-like trophoblastic cells with a relatively high degree of nuclear atypia (Figures 2c and d). Upon immunostaining,tumor cells exhibited extensive positivity for human chorionic gonadotropin (HCG), Ki-67 and p57kip2 (Figures 2e, f and g).

Structures indicating adenocarcinoma or squamous cell carcinoma were not found in the lesion. These findings allowed the final diagnosis of cervical choriocarcinoma. Contrast-enhanced computed tomography (CT) and magnetic resonance imaging (MRI) scans did not reveal metastatic lesions. According to the international federation of gynecology and obstetrics (FIGO) staging system, the case was classified as stage I; however, the risk score was at least 7, i.e. high-risk. Therefore, adjuvant chemotherapy with the regimen of EMA/CO, which in the form of etoposide, methotrexate, and dactinomycin altering weekly with cyclophosphamide and vincristine, was performed for three courses. Currently, the patient is being followed up monthly by the quantitation of serum β-hCG levels; and until now, there is no evidence of postoperative recurrence at 14 months. An illustration of the clinical course is shown in Figure 3.

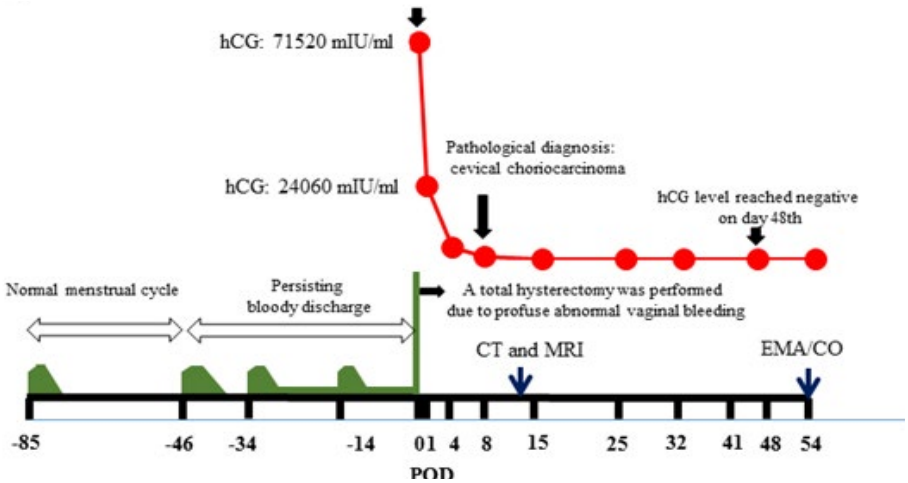

Figure 3: An illustration of the clinical course. The case presented with a minor bloody discharge following normal menstruation, which is 46days before. She was transferred to our hospital and presented with profuse and abnormal vaginal bleeding. A total hysterectomy was performed due to the life-threating bleeding condition. The postoperative diagnosis was stage I cervical choriocarcinoma. Chemotherapy was administered due to the elevated risk of recurrence according to the international federation of gynecology and obstetrics (FIGO) risk scoring system. The serum concentration of β-human chorionic gonadotropin (β-hCG) was 71520 mIU/mL before hysterectomy. The level of β-hCG decreased to 24060 mIU/mL and reached negative on the 1th and the 48th postoperative day, respectively. CT: Contrast-enhanced computed tomography; MRI: magnetic resonance imaging; EMA/CO: chemotherapy using etoposide, methotrexate, dactinomycin, cyclophosphamide and vincristine.

Discussion

Cervical choriocarcinoma is an extremely rare disease. Yet, the cervix is the most common extra-uterine site for the appearance of choriocarcinomas[4]. The diagnosis of cervical choriocarcinoma is difficult, given the fact that the most common symptom is the non-specific abnormal vaginal bleeding. As noted in our patient, the measurement of serum β-hCG concentration might be an effective examination. However, patients presenting augmented β-hCG levels combined with imaging evidence of a cervical mass, and empty uterus cavity still have to be examined for several differential diagnoses, e.g. cesarean section scar or cervical ectopic pregnancy[8]. Choriocarcinomas might develop after any pregnancy, due to malignant alterations in molar pregnancies, abortions, or normal or ectopic pregnancies. The latency period between the last pregnancy and the appearance of the choriocarcinoma may vary from a few months to 15 years[3]. Regarding the pathological analysis, several hypotheses have been postulated, e.g. malignant transformation of a cervical pregnancy and transportation of chorionic cells from a previous pregnancy[5,7,11]. As shown in Figure 3, the patient did not have any previous pregnancies. However, abnormal virginal bleeding persisted for circa 46 days prior to diagnosis. Therefore, an abortion or a cervical pregnancy might have preceded the neoplasia. However, the possibility of non-gestational origin should also be considered due to positive immunohistochemical staining for p57kip2 (Figure 2g)[9,13].

References

1. Chen MJ, Yang JH, Lin MC, Ho HN, Yang YS. An unusual gestational choriocarcinoma occurring primarily on the surface of a subserous leiomyoma. BJOG. 2004;111:188-190.

2. Dehner LP. Gestational and nongestational trophoblastic neoplasia: a historic and pathobiologic survery. Am. J. Surg. Pathpol. 1980;4:43-58.

3. Fox H. Gestational trophoblastic disease: neoplasia or pregnancy failure? BMJ. 1997; 314:1363-1364.

4. Herts BR, Yee JM, Porges RF. Primary cervical choriocarcinoma: case report and review of the literature. J Ultrasound Med. 1993;12:59-62.

5. Kairi-Vassilatou E, Papakonstantinou K, Grapsa D, Kondi-Paphiti A, Hasiakos D. Primary gestational choriocarcinoma of the uterine ceria: Report of a case and review of the literature. Int J Gynecol cancer. 2007;17:921-925.

6. Lurain JR., Sand PK., Brewer JI. Choriocarcinoma associated with ectopic pregnancy. Obstet Gynecol. 1986;68:286-287.

7.Maesta l, Michelin OC. Traiman P., Rudge MV. Primary non-gestational choriocarcinoma of the uterine cervix: A case report. Gynecol Oncol. 2005:98:146-150.

8. Nasiri S MSc, Sheikh Hasani S MSc, Mousavi A MSc, Modarres Gilani M MSc, Akhavan S MSc, Vakili MR MSc. Placenta Site Trophoblastic Tumor and
Choriocarcinoma from Previous Cesarean Section Scar: Case Reports. Iran J Med Sci. 2018;43(4):426-431.

9. Popiolek DA, Yee H, Mittal K, Chiriboga L, Prinz MK, Caragine TA, et al. multiplex short tandem repeat DNA analysis confirms the accuracy of p57(KIP2) immunostaining in tha diagnosis of complete hydatidiform mole. Hum pathol. 2006;37:1426-1434.

10. Robboy SJ, Anderson MC, Russell P. Pathology of the female reproductive tract. Philadelphia; Churchill Livingstone, 2002.

11.Wang D, He Y, Hu Y, Xie C, Yin R. Placental site trophoblastic tumor with unusual presentation in the uterine cervix. Eur J Obstet Gynecol Reprod Biol. 2010:148:100-101.

12. Weiss S., Amit A., Schwartz MR., Kaplan AL. primary choriocarcinoma of the vulva. Int J gynecol cancer. 2001; 11:251-254.

13. Zhao J, Xiang Y, Wan XR, feng FZ, Cui QC, Yang XY. Molecular genetic analyses of choriocarcinoma. Palacenta. 2009; 30:816-820.