Case Report

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Cervical Cancer Diagnosed in the Early Weeks of Pregnancy: A Case Report of Cervical Adenocarcinoma

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ABSTRACT

Cervical cancer diagnosis during pregnancy is the most common type of gynecological cancer. However, cervical adenocarcinoma is rarely seen. A 29-year-old patient, G1P0, presented with vaginal bleeding and a hemorrhagic mass was detected on gynecological examination of the cervix. Ultrasound revealed a 7-week pregnancy. After obtaining written consent regarding the pregnancy and cervical mass, colposcopy revealed a 2 cm diameter cervical mass (FIGO stage IB1) involving the cervical transformation zone, and cold knife conization was performed. The histopathological result was reported as a well-differentiated cervical adenocarcinoma measuring 2 x 1.5 x 0.6 cm, with an invasion depth of 6 mm, positive basal surgical margin, and positive lymphovascular space invasion. Despite being informed about pregnancy and cervical cancer and its risks, the patient refused any intervention and wished to continue her pregnancy. At the follow-up visit, no pathology was detected on pelvic magnetic resonance imaging, control colposcopic examination, or gynecological examination. During the pregnancy follow-up period, a live male infant weighing 3100 g was delivered at 38 weeks. Two months after delivery, the patient consented to surgical treatment and underwent a hysterectomy, bilateral salpingectomy, and pelvic lymph node dissection. After a 2-day follow-up, the patient's condition was stable and she was discharged. Every pregnant woman should be assessed with a gynecological speculum examination. Treatment management can be adapted according to the reproductive desires of patients of childbearing age.

Keywords: Cervical cancer, conization, diagnosis, pregnancy, treatment

INTRODUCTION

Cervical cancer is the second most common cancer diagnosed during pregnancy, occurring in 0.1-12.0 per 10,000 pregnancies.[1] The transformation zone naturally turns outward under the influence of high oestrogen levels; during pregnancy, it is usually easy to reach the squamous-columnar junction.[2] This facilitates diagnosis and treatment during pregnancy. Cervical cancer diagnosed during pregnancy is one of the most problematic diseases because it also affects the pregnant uterus. If possible, standard treatment for cervical cancer is appropriate during pregnancy.[3] Diagnosis of invasive cervical cancer during pregnancy requires a multidisciplinary approach. The aim of cervical cancer treatment during pregnancy is to provide oncological and perinatal care and to ensure fetal survival without risk of morbidity.[4] The purpose of this case report is to present a case of cervical adenocarcinoma diagnosed in the early weeks of pregnancy and describe management and outcome.

CASE REPORT

A 29-year-old G1P0 woman presented with vaginal bleeding. A hemorrhagic mass approximately 2 cm in diameter was detected on gynecological examination of the cervix, and ultrasound revealed a 7-week pregnancy. After informing the patient about the procedure and obtaining her consent, a 2 cm cervical mass, including the cervical transformation zone, was detected during colposcopy. Cold knife conization was performed (Figure 1 shows the front view of the conization specimen, Figure 2 shows the rear view), and the cervix was

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sutured at the 6 and 12 o'clock positions. Following surgery, transvaginal ultrasound revealed a cervical length of over 35 mm. The pathological finding was reported as a well-differentiated cervical adenocarcinoma measuring 2 × 1.5 × 0.6 cm, with a 6 mm invasion depth, positive basal surgical margin, positive lymphovascular space invasion (the black arrow in Figure 3 indicates the endocervical epithelium, while the asterisk indicates the adenocarcinoma portion of the tissue (hematoxylin and eosin stain x25), and as seen in Figure 4, the carcinoma cells were immunopositive for P16 (p16 x 50). The patient was informed about pregnancy, cervical cancer, and all risks (including hysterectomy, bilateral salpingectomy, and pelvic lymph node dissection), but refused surgery and wished to continue her pregnancy. At a follow-up visit approximately three weeks later, pelvic magnetic resonance imaging (MRI) revealed no evidence of parametrial involvement or lymph node involvement. No lesions were detected during the patient's follow-up colposcopic examination and the patient did not receive any chemotherapy during follow-up. During the pregnancy follow-up period, due to breech presentation during labor + intracervical adenocarcinoma, a live male baby weighing 3100 g was delivered at 38 weeks of gestation with an Apgar score of 9-10. Preoperative positron emission tomography/computed tomography (PET/CT) revealed increased focal fluorosdeoxyglucose (FDG) uptake (maximum standard uptake value =6.98) at the level of the cervix uteri, and pelvic MRI showed a 12 mm signal change on the mucosal surface at the level of the cervix uteri and mucosal involvement on contrast-enhanced imaging. The patient

Figure 1. Anterior view of conization specimen of the cervix

Figure 2. Posterior view of conization specimen of the cervix

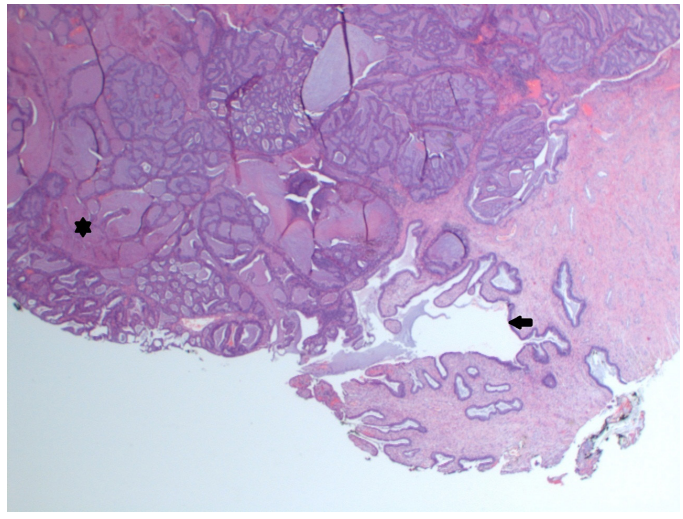

Figure 3. Black arrow in the figure show endocervical epithelium and asterisk show adenocarcinoma part of the tissue (HE X 25)

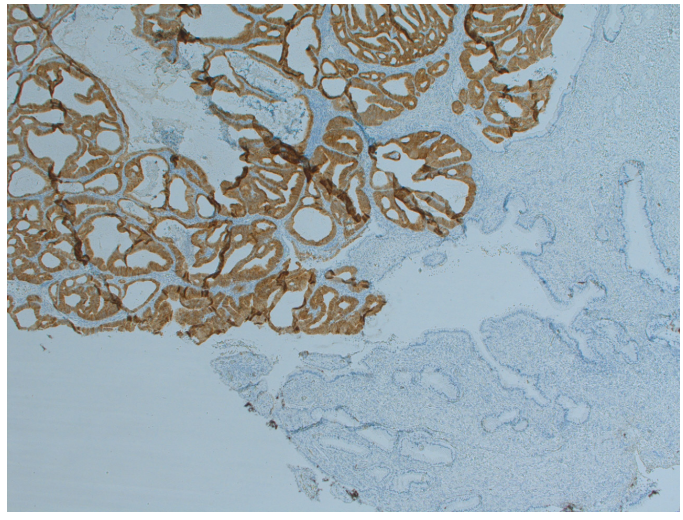

Figure 4. Carcinoma cells are immunopositive with P16 (p16 X 50)

consented to surgery and underwent a hysterectomy, bilateral salpingectomy, and pelvic lymph node dissection two months after delivery. In addition, ovarian transposition was performed, and the ovaries were removed from the pelvis. The patient was monitored in the clinic for two days postoperatively and was discharged in stable condition and fully recovered. The histopathological result was reported as normal at the surgical margins.

DISCUSSION

The most common histological subtypes of cervical cancer are squamous cell carcinoma and adenocarcinoma, seen in approximately 70% and 25% of all patients, respectively.[5] In this case, the histological type of cervical cancer was reported as adenocarcinoma. Symptoms may include abnormal, foul-smelling vaginal discharge (which may be watery, purulent or mucous), prolonged or irregular vaginal bleeding, and pelvic pain. As these symptoms may also be seen in other conditions during pregnancy, diagnosis can be difficult.[6] In this case, there was a complaint of vaginal bleeding. Histopathological examination was performed for a definitive diagnosis. Guidelines for cervical cancer during pregnancy recommend colposcopic biopsy without cervical curettage. The risk of HGSIL progressing to invasive cancer during pregnancy is thought to be less than 2%.[4] Diagnostic procedures during pregnancy should comply with standard oncological principles, such as colposcopic examination, preferably MRI, assessment of lymph node involvement, and FIGO staging.[3,6] However, unlike non-pregnant patients, imaging methods involving ionising radiation, such as CT or PET/CT, are contraindicated due to their teratogenic potential. Furthermore, gadolinium-based contrast agents used in MRI are often avoided due to association with poor pregnancy outcome, such as stillbirth.[7] The staging of cervical cancer is based on the size of the tumor, vaginal or parametrial involvement, spread to neighbouring organs such as the bladder or rectum, and distant metastases. For patients diagnosed during pregnancy, the gestational age (determined by ultrasound) and the patient's decision to continue the pregnancy must also be taken into account. In IA2 to IB1 stage cervical cancer up to 2 cm, pelvic lymphadenectomy and surgical staging are an important part of treatment planning. Laparoscopic staging provides low surgical morbidity while also allowing for accurate assessment of lymph node involvement.[8] If lymph node involvement is not detected, it is recommended to postpone cervical conization or simple trachelectomy until fetal maturity is achieved. As an alternative treatment, radical trachelectomy may lead to fetal death and significant blood loss, while simple trachelectomy (cervical amputation) is controversial.[9] In a study conducted by Vercellino et al.,[10] standard laparoscopic pelvic lymphadenectomy was performed on 32 cases of cervical cancer in the late first trimester and second trimester, and no complications or problems were encountered during surgery. The total number of lymph nodes removed during surgery was comparable to that in non-pregnant women. This study demonstrated that when performed by skilled practitioners, this method is safe and effective before the 22nd week of pregnancy.[10] However, MRI allows for cervical amputation/simple trachelectomy within limits where the disease has not spread, and can also be used to assess the suitability of the technique and for cervical cancer follow-up. As cervical adenocarcinoma can spread outside the pelvis and has a poor prognosis, aggressive treatment is recommended in these cases.[11] In this case, a speculum examination was performed, and a conization was carried out due to suspected cancer, but an endocervical curettage was not performed due to pregnancy. MRI was used as the imaging method. Moreover, the patient refused surgical intervention during pregnancy.

Studies have found that women diagnosed with cervical cancer during pregnancy have similar oncological prognoses to non-pregnant women.[12,13] However, no difference was found in terms of gestational age and preterm birth rates among the children of women diagnosed with invasive cervical cancer.[14] Furthermore, the effect of pregnancy on the progression of cervical cancer remains controversial. Increased levels of progesterone, oestrogen, and human chorionic gonadotropin during pregnancy, along with local immunosuppression, may indirectly affect the progression of cervical cancer during pregnancy by triggering reactivation of human papillomavirus. Furthermore, increased uterine blood flow and dilation of the cervix during childbirth may increase the likelihood of cancer cell spread and trigger the progression of cervical cancer.[12] However, most cases of cervical cancer detected during pregnancy are stage I, which may increase the likelihood of continuing the pregnancy and achieving a full recovery.[4] In this case, the cervical length was measured to be over 35 mm following cold conization. A cesarean section was performed at 38 weeks of gestation due to breech presentation during labor and endocervical adenocarcinoma. No additional treatment was given to the patient who underwent surgery for early-stage cervical cancer because the risk was low. However, cervical adenocarcinoma may regress, remain stable, or progress during treatment. For these reasons, personalized treatment is strongly recommended for pregnant women with cervical cancer, and the treatment decision may be made jointly by obstetricians, gynecologists, oncologists, paediatricians, and psychologists in consultation with the patient.[15] According to data from the International Network of Infertility and Pregnancy, the prognosis is no worse than for the non-pregnant population.[16] As cervical cancer is rare during pregnancy, further research or randomized studies are required.

CONCLUSION

Cervical cancer is the most common gynecological malignancy detected during pregnancy. Every pregnant woman should be assessed with a gynecological speculum examination. Treatment methods depend on various factors, including the stage of the disease, lymph node involvement, histological subtype, the patient's desire for pregnancy, gestational age, and the duration of pregnancy at the time of admission. Treatment management can be adapted according to the patient's desire for fertility during the reproductive period.

Ethics

Informed Consent: Written informed consent was signed by the patient for this case report.

Footnotes

Authorship Contributions

Surgical and Medical Practices: A.B., F.A., Ç.Ç., P.K., Concept: A.B., Data Collection or Processing: A.B., P.K., Analysis or Interpretation: F.A., Ç.Ç., P.K., Literature Search: F.A., Ç.Ç., Writing: A.B., P.K.

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