Successful conservative treatment of microinvasive cervical cancer during pregnancy

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Abstract

Cervical cancer complicated by pregnancy is a rare event. While counseling patients with cervical cancer during pregnancy, many factors must be considered, including the patient’s desire to continue the pregnancy, the stage of the disease, and the gestational age at diagnosis. Pregnant women with microinvasive cervical cancer should be fully informed of all possible treatment options and consequences. Herein, we report the case of a woman who was diagnosed with microinvasive cervical cancer during pregnancy at 10 weeks of gestation. After a combination treatment of cervical conization, cervical cerclage, and cesarean section, she delivered a healthy baby and at 7 months postpartum there was no indication of malignancy.

Keywords: conization; pregnancy; uterine cervical cancer

1. Introduction

Although invasive cervical cancer is relatively uncommon, it is still the most common malignancy associated with pregnancy, with a reported incidence rate of 0.45–1 per 1000 pregnancies.1 The prevalence rate of abnormal Papanicolaou (Pap) test results during pregnancy does not differ from the age-matched nonpregnant population. Among patients with cervical cancer, approximately 1–3% are pregnant during diagnosis.2 Diagnosis of cervical cancer during pregnancy presents a dilemma—how to provide effective management of the cervical cancer without affecting the pregnancy. Herein, we report the case of a patient with cervical cancer who received successful conservative treatment.

2. Case report

Our patient was a 32-year-old woman, who presented in the 10th week of her first pregnancy for a routine Pap smear test, the result of which showed a high-grade squamous intraepithelial lesion. A colposcopic examination showed atypical vessels at the 1 o’clock position (Fig. 1), and results of a directed biopsy of tissues from this area revealed microinvasive carcinoma. After a discussion of the different treatment options, the patient preferred a conservative approach. Four weeks later, at 14 weeks of gestation, under epidural anesthesia, a loop electrosurgical excision procedure (LEEP) for a shallow cervical conization was performed. Results of a histological analysis confirmed invasive, well-differentiated squamous cell carcinoma (SCC; depth: 2 mm; width: 4 mm) with free margins, and invading into the cervical stroma without lymphovascular involvement (Fig. 2).

Subsequently, the cervical length was measured by transvaginal sonographic measurement and was found to be approximately 24 mm. The patient then underwent a Shirodkar cerclage at 18 weeks of gestation to prevent premature labor.

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The postoperative course was unremarkable. A Pap smear was repeated two times in the 1st month and again at the 3rd month after operation without evidence of abnormal cells. At 38 weeks of gestation, she received an elective cesarean section and delivered a male fetus weighing 3195 g with Apgar scores of 8 and 9 at 1 and 5 minutes, respectively. The 6-week postpartum check-up, including a Pap smear, colposcopy, endocervical curettage, squamous cell antigen of the cervix (SCC), and a pelvic/abdominal computed tomography, was normal without any evidence of malignancy. Presently, 7 months postpartum, the patient remains in good condition.

3. Discussion

It is unusual for cervical cancer to complicate a pregnancy. In Taiwan and in developed countries, the introduction of cervical cytology has been associated with the early detection of cervical cancer and the reduction in the morbidity and mortality rates due to prompt treatment and the disease itself. A speculum examination and cervical smear are suggested for all pregnant women. Our patient underwent a routine Pap smear test, and her abnormal cytology was identified incidentally.

All pregnant women with abnormal cytological findings should undergo a colposcopy and, when indicated, directed biopsies. Colposcopy and directed biopsies can be performed safely during all trimesters, although most clinicians prefer to wait until the second trimester when the risk of unrelated spontaneous pregnancy loss is minimal. Our patient underwent biopsies under colposcopic examination at 10 weeks of gestation, which revealed the microinvasive cervical cancer.

Pregnant women with microinvasive cervical cancer should be fully informed of all possible treatment options and consequences. All decisions regarding therapy, such as balancing the risks to the fetus from therapy against the potential risk to the mother from delaying therapy, should be addressed by a multidisciplinary team. Our patient preferred a conservative treatment with conization as the first step.

Cervical conization performed during pregnancy is associated with increased morbidity from hemorrhage and infection, as well as pregnancy loss or preterm delivery when compared with control nongravid patients. The only absolute indication for conization in pregnancy is either to rule out a microinvasive lesion or to make a diagnosis that will change either the timing or the route of delivery. The indication for conization of our patient in this case was to confirm the microinvasive disease definitively. To accomplish this, either a wedge or a shallow disk or coin-shaped specimen should be obtained. Such a shallow excision will cause less disruption to the endocervical canal and may decrease both bleeding and preterm labor complications. LEEPs have been proposed as an alternative method to cold-knife conization, although electrocautery artifacts may obscure the status of the cervical cone margins. Our patient underwent a shallow conization by LEEP following this principle with unremarkable consequences. We did not perform endocervical curettage on our patient, as the procedure is discouraged during pregnancy due to the risk of premature rupture of the membrane.

Some authors have indicated that cold-knife conizations, laser conizations, or LEEP can be associated with a significantly increased risk of preterm premature rupture of the membrane. Consequently, cervical cerclage may play a role in pregnant women who have undergone these procedures earlier. Our patient underwent a Shirodkar cerclage at 18 weeks of gestation and continued her course of pregnancy to term.

In all stages of pregnancy, the prognosis for women diagnosed with cervical cancer during pregnancy seems to be similar to that of nonpregnant women. In our patient, the diagnosis of stage IA1 cervical carcinoma after conization of the cervix showed only microinvasion. If the margins of the specimen are negative, several studies have demonstrated good outcomes with expectant management, using colposcopy and pelvic examinations every trimester. Moreover, cervical conization seems to be a standard treatment for stage IA1
In the nonpregnant population with stage IA1 squamous cervical cancer, the risk of pelvic lymph node metastasis and the 5-year survival rate are 0.6% and 99%, respectively. However, the patient must be cooperative, and participate in long-term follow-up. Fortunately, the histology of this patient’s cone specimen revealed lesion-free margins. Conservative management for patients with stage IA1 cervical cancer should only be considered in those with squamous carcinoma. Under certain conditions, microinvasive SCC can be treated solely with conization, but such a course of treatment is not well established for adenocarcinomas.

By contrast, the prognosis of the pregnancy is often affected by the diagnosis of cancer. A large study showed that women diagnosed with cervical cancer during pregnancy or in the postpartum period have higher rates of spontaneous and iatrogenic prematurity, resulting in increased rates of low birth weight and very low-weight infants. Our patient finally reached full-term pregnancy and delivered a healthy boy through comprehensive management.

In conclusion, we emphasize the importance of conservative treatment for pregnant women who desire to continue their pregnancies. Efforts have been directed during the last decade to identify subsets of women with early-stage cervical carcinoma who can obtain an excellent prognosis with fertility-sparing surgery. Under certain conditions, microinvasive SCC can be treated solely with cone biopsy, as in the case we have just presented. This affords women the opportunity in the future.

References