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Laparoscopic Pelvic Lymphadenectomy in a Patient with Cervical Cancer Stage Ib1 Complicated by a Twin Pregnancy

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ABSTRACT Cervical cancer is the most frequently observed malignancy during pregnancy. The presence of nodal metastasis is the most important negative predictor factor, and its assessment is crucial in deciding whether the pregnancy can safely continue. To our knowledge, this is the first report of a twin pregnancy complicated by cancer of the uterine cervix that was sucessfully treated with laparoscopic pelvic lymphadenectomy and subsequently with neoadjuvant chemotherapy. A 35-year-old woman, gravida 2, para 1, with a dichorionic-diamniotic twin pregnancy underwent laparoscopic staging of the pelvic lymph nodes at 17 weeks of gestation. Cervical adenocarcinoma, grade 2, stage 1b1 with lymphovascular space invasion was diagnosed. Nineteen negative nodes were removed, and the patient was counseled to continue the pregnancy. On the basis of tumor size and detection of lymphovascular space invasion, cisplatin as neoadjuvant chemotherapy was administered until week 32 of gestation, when a cesarean section delivery was performed, along with radical hysterectomy. No complications to the neonates or to the mother due to the therapy were observed. This case demonstrates the safety of operative nodal staging during gestation, even in a twin pregnancy. Exclusion of nodal metastasis may improve oncologic outcomes, and neoadjuvant chemotherapy Q2 should be administered when indicated. Journal of Minimally Invasive Gynecology (2009) ■, ■–■ © 2009 AAGL. All rights reserved.

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In recent decades, maternal age has increased, leading to a higher incidence of cancer diagnosed during pregnancy. Cervical cancer occurs classically in young women and is the most common solid malignant lesion found during gestation [1], with an incidence of 1.6 to 10.6 per 10 000 pregnancies. Only 20% of these lesions are diagnosed in the prenatal period [1].

Traditionally, standard therapy has been termination of the pregnancy with immediate cervical cancer treatment when the diagnosis is confirmed before 20 weeks of gestation. However, recent studies that attest to the safety of cancer treatment delay to reach fetal viability, and the use of new therapeutical methods have changed this concept.

Pelvic nodal status is the most important negative prognostic factor in early cervical cancer, and its assessment during pregnancy is crucial to establish a treatment strategy [2]. When lymph nodes are negative, maintenance of gestation for fetal benefit may be done with safety [2]. Conversely, removal of the lymph node metastasis might have a therapeutic effect and also contraindicates oncologic treatment delay [3]. Neoadjuvant chemotherapy during gestation is controversial, although its use may reduce tumor size and control micrometastatic disease. Administration must be delayed until completion of organogenesis, and cisplatin is considered the most active agent.

Herein, we present the first report, to our knowledge, of a twin pregnancy complicated by cervical cancer in which bilateral pelvic laparoscopic lymphadenectomy was sucessfully performed.

Case Report

A 35-year-old woman, gravida 2, para 1, with a twin pregnancy (dichorionic-diamniotic) was first seen for prenatal care at 13 weeks of gestation. A 3-cm exophytic cervical tumor without vaginal or parametrial infiltration (FIGO clinical stage Ib1) was found. Loop conization was performed, and histologic analysis revealed a moderately differentiated

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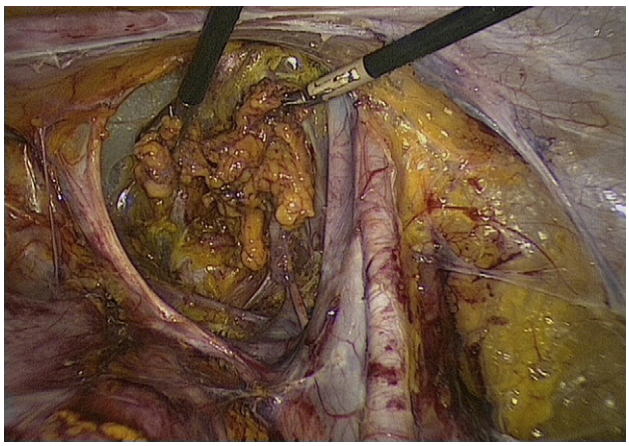

Fig. 1. Situs after right-sided pelvic lymphadenectomy. Removed lymph nodes are held with graspers.

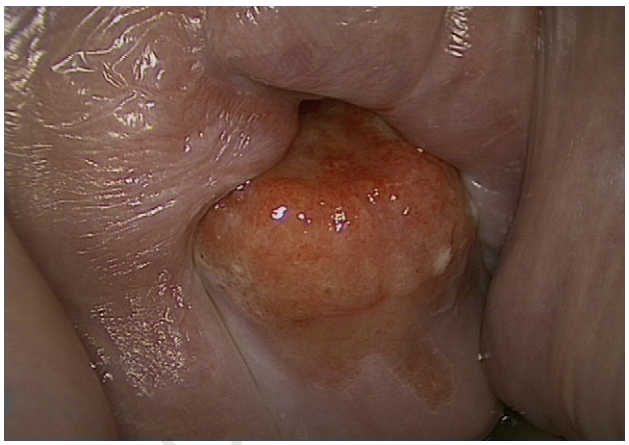

Fig. 2. Colposcopic view before biopsy of the posterior lip at pelvic lymphadenectomy. Q4

adenocarcinoma with lymphovascular space involvement. The patient had been counseled to terminate the pregnancy, and came to our institution for a second opinion.

To determine whether conservative management would be safe, we performed a laparoscopic bilateral transperitoneal pelvic lymphadenectomy to exclude nodal metastasis. Although the procedure was perfomed at 17 weeks of gestation, the uterus was compatible with a 24-week singleton pregnancy. The laparoscopic entry was uneventful. The first trocar (10 mm) was directly inserted into the left upper quadrant (subcostal) without use of a Veress needle. After visual confirmation of abdominal entry, insufflation of gas into the abdomen was achieved through the cannula with the blunt obturator in place. The umbilical trocar (10 mm) and 3 accessory trocars above the symphysis pubis (5 mm) were placed under camera visualization. Operation time was 112 minutes, with blood loss of 20 mL; a cervical repeat biopsy was also performed. No intraoperative or postoperative complications were observed, and the patient was released in good condition after 7 days of hospitalization. Nineteen negative lymph nodes were removed, and the cervical specimen showed a residual adenocarcinoma. On the basis of tumor size and detection of lymphovascular space involvement, neoadjuvant chemotherapy with cisplatin was indicated.

Chemotherapy was started at 20 weeks of gestation and was well tolerated. Three cycles of cisplatin, 20 mg/m^2, were administrated at 21-day intervals. Fetal surveillance revealed normal intrauterine growth and local colposcopic and radiologic (magnetic resonance imaging) control showed no tumor progression.

At 32 weeks of gestation, after fetal lung maturation, a cesarean section was performed, followed by radical hysterectomy and removal of additional pelvic nodes. Histologic analysis confirmed tumor regression, with a small focus of residual adenocarcinoma and 7 tumor-free pelvic lymph nodes.

The neonates weighed 1790 and 2020 g, respectively, with Apgar scores of 8/9/10 and 7/9/10. No significant neonatal problems were observed. No blood tests of kidney, liver, and bone marrow function were performed. Neurologic and cardiac evaluations yielded normal findings, and auditory brainstem response was present. The mother was followed up oncologically for 1 year without signs of tumor recurrence.

Discussion

Management of cervical cancer during pregnancy is primarily influenced by gestational age, tumor stage, and patient desire. Currently, no general guidelines or consensus with respect to clinical management exist, especially in cases in which the diagnosis is confirmed before 20 weeks of gestation. In early cervical cancer, lymph node metastasis is found in as many as 20% of patients [4]. In nonpregnant women, laparoscopic surgery may be considered the criterion standard of assessment, and according to a large series, the procedure is considered safe [4]. However, during pregnancy, the size of the uterus and collateral vascularization may increase surgical difficulty, especially in a twin preganancy.

The literature includes 3 articles about laparoscopic lymphadenectomy in pregnancies complicated by cervical cancer. Alouini et al [3] reported the cases of 8 patients and confirmed that nodal metastasis has an important adverse effect on survival. None of the authors reported any particular fetal or maternal morbidity or mortality. Nevertheless, the size of the uterus and the gestational age are important factors in deciding whether the procedure is technicaly feasible or necessary. In theory, the surgical risk is greater when the diagnosis is confirmed after 20 weeks of gestation.

Neoadjuvant chemotherapy during gestation seems to have advantages, primarily to prevent tumor dissemination. To date, there have been reports of 11 patients, 5 of whom developed disease recurrence and died. However, in none of these women were lymph nodes

removed before therapy, which could have prevented these adverse results.

In accordance with the current literature, we confirm the safety and feasilbiity of the procedure. We consider that, when early-stage cervical cancer is diagnosed before 20 weeks of gestation, pelvic nodal status must be assessed to exclude metastasis and to ensure that definitive oncologic treatment can be safely postponed.

Uncited Figures

Fig 1, Fig 2

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