OPEN ACCESS
Scholars International Journal of Obstetrics and Gynecology
Abbreviated Key Title: Sch Int J Obstet Gynec
ISSN 2616-8235 (Print) |ISSN 2617-3492 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Case Report

Cervical Cancer during Pregnancy: Case Report and Literature Review

I. Laghrich[1*], R. Ngendabanyikwa[1], K. Guelzim[1], A. Babahabib[1], J. Kouach[1]

[1]Gynecology Obstetrics Department, Mohamed V Military Training Hospital, Rabat, Morocco

DOI: 10.36348/sijog.2023.v06i04.003 | **Received:** 21.02.2023 | **Accepted:** 03.04.2023 | **Published:** 20.04.2023

***Corresponding author:** I. Laghrich
Gynecology Obstetrics Department, Mohamed V Military Training Hospital, Rabat, Morocco

Abstract

Cervical cancer coexisting with pregnancy is a rare occurrence with an incidence estimated between 1 and 2/10,000 according to studies. The diagnosis presents a challenge due to cervical changes observed during early pregnancy, and treatment must balance the imperative to manage the mother's cancer while also considering the fetus. This association poses four major problems: the difficulty of diagnosis, the prognosis of the disease, the timing of surgical treatment, and the effect on the pregnancy and mode of delivery. This study presents a series of five cases of cervical cancer discovered during pregnancy between 2010 and 2013. The therapeutic management is similar to that of non-pregnant patients, although some adaptations are necessary due to the gravid state, and pregnancy does not appear to alter the prognosis of the cancer.

Keywords: Cervix, cancer, pregnancy, case report (Gynecology).

INTRODUCTION

The diagnosis of invasive cervical cancer (ICC) during pregnancy is not always clear. The incidence of dysplasia during pregnancy is estimated at 1%, and cervical cancer at 1 in 10,000 pregnancies. It is one of the most commonly diagnosed cancers during pregnancy, along with breast cancer, lymphomas, and melanomas. However, the exact incidence remains uncertain [1]. For patients who are not closely monitored, the beginning of pregnancy should be an opportunity to perform a Pap smear if it has not been done recently and to sensitize patients to the need for surveillance [2]. The recommendation for systematic Pap smear testing at the beginning of pregnancy will increase the incidence of the discovery of precancerous lesions, hence the importance of defining clear guidelines. For cancers occurring during pregnancy, the objectives are twofold and sometimes conflicting: to provide a management approach closer to that of non-pregnant patients, i.e., not to undertreat because of pregnancy and if possible, to maintain the pregnancy. Previously, termination of pregnancy was often recommended during the first two trimesters, but recent publications report cases of preserving the pregnancy. This should not be at the expense of the cancer outcome [3].

CASE REPORT

We present a case of a 31-year-old female patient, G5P2 with 2 vaginal deliveries and 2 early miscarriages, with a family history of breast cancer in two maternal aunts, one of whom underwent successful surgery and the other passed away from metastatic breast cancer at an advanced age. The patient presented at 20 weeks of gestation with spontaneous and repeated vaginal bleeding.

A clinical examination with a speculum revealed a 2cm ulcerative cervical tumor without invasion of the vagina or surrounding tissues.

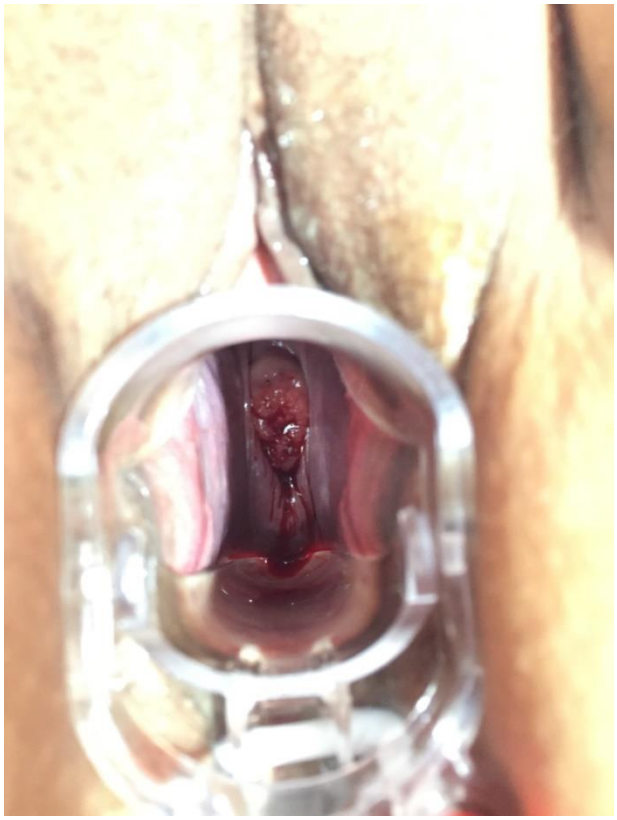

Figure: Macroscopic aspect of the cervical tumor on speculum examination

A biopsy of the tumor revealed a differentiated squamous cell carcinoma. Further tests were performed to assess the extent of the cancer, including a pelvic MRI which showed a poorly defined left postero-lateral lip lesion measuring 13x6mm, with no pelvic lymph node involvement, indicating a stage Ib1 cervical lesion.

Due to the early stage of the disease, it was decided to continue the pregnancy until fetal maturity, in agreement with the parents. However, at 26 weeks of gestation, an emergency cesarean section was performed due to fetal distress caused by maternal pre-eclampsia, resulting in the birth of a newborn weighing 650g who passed on day 3 of life.

Three weeks later, a PET scan was performed in preparation for oncologic surgery, which showed intense pathological hypermetabolism in the cervical tumor, without evidence of pelvic or lumbar lymph node involvement. The patient subsequently underwent extended colpohysterectomy with bilateral pelvic sentinel lymph node dissection. Postoperative recovery was uneventful.

Histopathological examination of the surgical specimen confirmed stage Ib1 disease with no lymphatic emboli, and the sentinel lymph node was negative.

The patient was followed up for 2 years without any particular issues.

DISCUSSION

The diagnosis of ICC during pregnancy is most often performed through Pap smear testing. During pregnancy, although there is a tendency to overestimate the lesions due to stromal and endometrial glandular changes, the rate of ASC (atypical squamous cells) on Pap smears is higher, and the sensitivity of the Pap smear is the same as outside of pregnancy [4, 5]. In case of cytological abnormalities suggestive of high-grade lesion and ASC-H (high-grade squamous intraepithelial lesion) or invasive carcinoma on Pap smear, colposcopy with biopsy should be performed promptly. Colposcopy remains the reference examination in case of cytological abnormalities during pregnancy. The signs of infiltration are the same as those recognized outside of pregnancy, mainly ulceration, atypical vascularization, and a very thick acidophilic zone. These lesions require biopsy. Even though there is a higher risk of bleeding, it can be controlled by packing, electrocoagulation, or suturing, and this risk should not compromise the biopsy if it appears necessary [4, 6].

Metrorrhagia is the main clinical sign. It should not be wrongly attributed to pregnancy. In case of any metrorrhagia during pregnancy, the examination should begin with a speculum examination to identify the origin of bleeding. The extension assessment of the

tumor relies on clinical examination and abdominopelvic MRI (traditionally without gadolinium injection in the first trimester). A chest X-ray may be performed (with fetal protection) after the first trimester for locally advanced tumors (≥4 cm) [5]. The therapeutic management depends on the stage (and tumor size), histological type of the tumor, term of pregnancy, and the couple's desire to possibly maintain the pregnancy. Prognostic factors are the same as outside of pregnancy, with the two main factors being stage and lymph node involvement. The discussion should involve gynecologists, medical oncologists, radiation oncologists, radiologists, and pathologists to define an "optimal" cancer management, as well as obstetricians and neonatologists to achieve the best compromise between maternal and fetal prognosis. If delivery is planned before 38 weeks gestational age, it should be performed in a perinatal center with the appropriate level of care [7]. After fetal maturity (34-35 weeks gestational age), it is possible to maintain the pregnancy while not delaying the therapeutic management of the cervical lesion, which will be performed after delivery according to standards. The delivery date will be determined based on the gestational age at the time of diagnosis and the degree of urgency to treat the cervical lesion (tumor size and stage). Delivery should be performed by cesarean section. Before fetal maturity, if it is a "classic" histological type tumor and the patient wishes to maintain her pregnancy, the treatment will depend on the stage of the disease and gestational age. Indeed, the possibility of performing certain staging procedures depends on the uterine volume: until 20-24 weeks gestation, the primary laparoscopic pelvic lymphadenectomy can usually be performed without being too hindered by the uterine volume. It allows identifying the subgroup of patients who have the worst prognosis, i.e., with lymph node involvement, and whose treatment cannot be deferred after delivery [4-7].

For early stage tumors with negative pelvic lymph nodes, surveillance during pregnancy without treatment of the cervical lesion is recommended. This surveillance will be clinical and radiological (abdominopelvic MRI every four to eight weeks although there is no consensus regarding the frequency of surveillance). In the absence of tumor progression, the cervical tumor will be treated as soon as fetal maturity is reached. Delivery will be by cesarean section and treatment of the cervical lesion will be carried out according to standards. If pelvic lymph node involvement is present, medical termination of pregnancy should be offered and the treatment should be concurrent radiochemotherapy (after achieving uterine emptiness). The extent of the radiation fields will depend on the level of lymph node involvement (pelvic alone or pelvic and para-aortic). Para-aortic involvement can be specified either by laparoscopic para-aortic lymphadenectomy or by a PET scan performed after fetal expulsion [7].

For advanced stage tumors (from stage IB2 according to the FIGO classification), the standard treatment is concurrent radiochemotherapy. If the tumor is diagnosed before 22 to 24 weeks of gestation, termination of pregnancy is recommended. After 24 weeks of gestation (provided there is no radiological evidence of lymph node or extrapelvic involvement), radiochemotherapy can start after cesarean section, which will be done as soon as fetal maturity allows (provided that obtaining fetal maturity does not delay the start of tumor treatment by more than six to eight weeks) [8]. An option can be discussed in patients who wish to preserve their pregnancy: neoadjuvant chemotherapy. This treatment can only be proposed in patients with a pregnancy term over 20 weeks and after informing them of the possible oncological risks, described in the literature, of treatment failure and therefore tumor progression with a risk to the patient's life, and the uncertainty of the fetal consequences of chemotherapy [9].

The prognosis of the condition is far from a simple theoretical question, as it determines the timing of treatment initiation. A preliminary answer can be provided for early stages of the disease (Ia, Ib, and IIa). One study, which compared 44 patients with cervical cancer to a control group of non-pregnant women with similar characteristics in terms of age, grade, stage, tumor type, and therapeutic management, did not show any statistical survival differences for early stages. However, due to the small sample size, no conclusions can be drawn for advanced stages [10]. Another study conducted under the same conditions by Hopkins, which paired 35 pregnant stage IB patients with 170 non-pregnant patients with a similar average age, treated between 1960 and 1989, also did not find any differences in survival. The time of diagnosis does not appear to affect the prognosis [11]. The 5-year survival rate was 90% for 10 patients diagnosed in the second trimester, 75% (5 patients) in the third trimester, and 75% for postpartum patients (20 patients) [12, 13].

CONCLUSION

For pregnant women who have had little follow-up or who have not been screened for more than two years, a cervical smear should be performed at the beginning of pregnancy to screen for cervical abnormalities and raise awareness of the importance of screening. For dysplasia lesions in the absence of proven invasion on colposcopy, treatment can be deferred until after delivery, provided that close monitoring is maintained. For invasive lesions, an MRI should be performed to better define the size of the lesion. Management will depend on the stage of the lesion, gestational age, and lymph node involvement, if this information can be obtained (pelvic lymph node dissection by laparoscopy up to 20-24 weeks for tumors less than 4 cm). The couple should be informed that pregnancy itself does not affect the prognosis of the tumor. If the couple chooses to continue the pregnancy

and treatment must be deferred to wait for fetal maturity, the risks associated with the delay must be evaluated based on the necessary delay and prognostic factors of the tumor. Treatment is decided collectively by the oncologist, surgical oncologist, obstetrician, neonatologists, and the couple.

Conflict of Interests: The authors declare no conflict of interests.

REFERENCES

1. Duggan, B., Muderspach, L. I., Roman, L. D., Curtin, J. P., d'Ablaing 3rd, G., & Morrow, C. P. (1993). Cervical cancer in pregnancy: reporting on planned delay in therapy. *Obstetrics and gynecology*, *82*(4 Pt 1), 598-602.
2. Moran, B. J., Yano, H., Al Zahir, N., & Farquharson, M. (2007). Conflicting priorities in surgical intervention for cancer in pregnancy. *The lancet oncology*, *8*(6), 536-544.
3. Stensheim, H., Møller, B., Van Dijk, T., & Fosså, S. D. (2009). Cause-specific survival for women diagnosed with cancer during pregnancy or lactation: a registry-based cohort study. *Journal of Clinical Oncology*, *27*(1), 45-51.
4. Uzan, C., Gouy, S., Balleyguler, C., Haie-Meder, C., & Morice, P. (2011). Cancer du col durant la grossesse. *Imagerie de la femme (Imprime)*, *21*(1), 17-20.
5. Selleret, L., & Mathevet, P. (2008). Precancerous cervical lesions during pregnancy: diagnostic and treatment. *Journal de Gynecologie, Obstetrique et Biologie de la Reproduction*, *37*, S131-138.
6. Kaminski, P. E., Lyon, D. S., Sorosky, J. I., Wheelock, J. B., & Podczaski, E. S. (1992). Significance of atypical cervical cytology in pregnancy. *American journal of perinatology*, *9*(05/06), 340-343.
7. Carillon, M. A., Emmanuelli, V., Castelain, B., Taieb, S., Collinet, P., Vinatier, D., ... & Narducci, F. (2011). Cancer du col utérin invasif et grossesse: cinq cas observés à Lille de 2002 à 2009. Évaluation des pratiques en référence aux recommandations françaises. *Journal de gynécologie obstétrique et biologie de la reproduction*, *40*(6), 514-521.
8. Vincens, C., Dupaigne, D., de Tayrac, R., & Mares, P. (2008). Prise en charge des volumineux cancers invasifs du col de l'utérus pendant la grossesse. *Gynécologie obstétrique & fertilité*, *36*(4), 365-372.
9. Hunter, M. I., Tewari, K., & Monk, B. J. (2008). Cervical neoplasia in pregnancy. Part 2: current treatment of invasive disease. *American journal of obstetrics and gynecology*, *199*(1), 10-18.
10. Van der Vange, N., Weverling, G. J., Ketting, B. W., Ankum, W. M., Samlal, R., & Lammes, F. B. (1995). The prognosis of cervical cancer associated with pregnancy: a matched cohort study. *Obstetrics & Gynecology*, *85*(6), 1022-1026.
11. Hopkins, M. P., & Morley, G. W. (1992). The prognosis and management of cervical cancer associated with pregnancy. *Obstetrics and gynecology*, *80*(1), 9-13.
12. Benhaim, Y., Pautier, P., Bensaid, C., Lhommé, C., Haie-Meder, C., & Morice, P. (2008). Neoadjuvant chemotherapy for advanced stage cervical cancer in a pregnant patient: report of one case with rapid tumor progression. *European Journal of Obstetrics and Gynecology and Reproductive Biology*, *136*(2), 267-268.
13. Cliby, W. A., Dodson, M. K., & Podratz, K. C. (1994). Cervical cancer complicated by pregnancy: episiotomy site recurrences following vaginal delivery. *Obstetrics and gynecology*, *84*(2), 179-182.