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Stage IVB Cervical Cancer and Pregnancy: A Case Report

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1. Abstract

Cervical cancer is one of the most frequently diagnosed gynaecological tumours during pregnancy, although it remains a rare event. In most cases, the management of pregnant patients does not differ significantly from that of non-pregnant women, and pregnancy does not appear to significantly affect the prognosis. However, the coexistence of cancer and pregnancy poses a real challenge, both medically and psychologically, for patients and healthcare providers. Therapeutic decisions must be individualized and made within a multidisciplinary framework. This review focuses on cervical cancer occurring during pregnancy. It aims to explore diagnostic methods, potential biomarkers, molecular aspects, therapeutic options, and prognostic data, covering the entire spectrum from cervical intraepithelial neoplasia to invasive cancers, whether at early or advanced stages, depending on gestational age. We report a case of metastatic stage cervical cancer during pregnancy.

2. Case Report

The patient was a 43-year-old woman, gravida IV, para III (2 vaginal deliveries, 1 miscarriage at 2 months gestation), who presented to our facility for postcoital bleeding that had been ongoing for one and a half years, initially stopped, then recurred at five months of pregnancy. Clinical examination on admission showed: blood pressure 120/60 mmHg, heart rate 87 bpm, urine dipstick negative, temperature 36.6°C, no uterine contractions, and no bleeding at the time of examination.

Speculum and Bimanual Examination were Unremarkable.

Speculum examination revealed the presence of an ulcerative, exophytic mass occupying the entire cervix and extending to the parametria, infected, with no fluid discharge, and unfavourable Bishop score. Obstetric ultrasound revealed a singleton intrauterine pregnancy with fetal cardiac activity (FCA+), cephalic presentation, fundal placenta, estimated fetal weight (EFW): 2446 g ± 357 g, amniotic fluid index (AFI): 2.5 cm, and cervical length: 5 cm.

Hospital Workup:

Hemoglobin: 9.2 g/dL, Hematocrit: 30.9%, MCV: 79.84 fL, MCHC: 28.8 g/dL, WBC: 10,320 /µL, Platelets: 541,000 /µL, PT: 80%, aPTT: 34.1 sec, Fibrinogen: 2.97 g/L, Urea/Creatinine: 0.25/5 mmol/L, AST/ALT: 23/16 U/L, LDH: 276 U/L, CRP: 68 mg/L.

Urine culture: Leukocyturia at 120,000 cells/mL, sterile culture.

The patient was started on antibiotics and received corticosteroid therapy.

Cervical biopsy showed a well-differentiated, non-keratinizing squamous cell carcinoma, ulcerated, necrotic, and infiltrating.

Pelvic MRI Findings:

- A tumour process in the uterine cervix, almost circumferential, with exophytic, multilobulated growth and irregular margins, showing intermediate heterogeneous T2 signal, measuring 86 × 62 mm with a 50 mm extension.

- The mass shows the following relationships:

- Posteriorly: Infiltration of the pouch of Douglas with disruption of the rectal fascia.
- Anteriorly: Mass effect on the bladder with suspected infiltration of the posterior-inferior bladder wall.
- Inferiorly: Infiltration of the upper two-thirds of the vagina, with extension reaching the anal canal and loss of the fat plane, suggesting possible invasion of the anterior anal canal wall.
- Laterally: Infiltration of the parametria, predominantly on the right.

• Muscles: Suspected bilateral invasion of the puborectalis muscles. The left levator ani muscle is in contact but separated by a preserved fat plane.

- Lymph nodes: Hyperintense lymphadenopathies on diffusion-weighted imaging (DWI), both centimetric and subcentimetric, were noted in the para-aortic region (largest: 18 × 22 mm), as well as in the internal, external, and common iliac, and inguinal chains. The largest node on the right (common iliac) measured 11 × 7 mm; on the left, 11 mm in short axis.

- No detectable intraperitoneal effusion.

- Bladder: Semi-full with homogeneous contents.

3. Conclusion

Large cervical tumour with signs of invasion into adjacent organs and suspected secondary bone involvement. Classified as FIGO stage IVB. Delivery was performed at 36 weeks of gestation, resulting in the birth of a male newborn, Apgar score 10/10, weighing 2800 g.

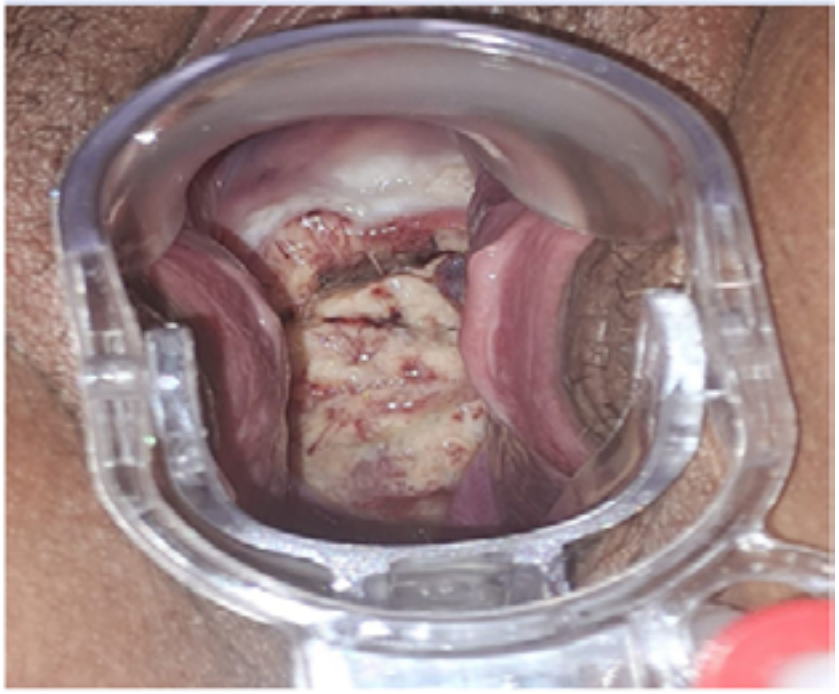

Figure 1: Ulcerated, exophytic, and invasive mass involving the entire cervix.

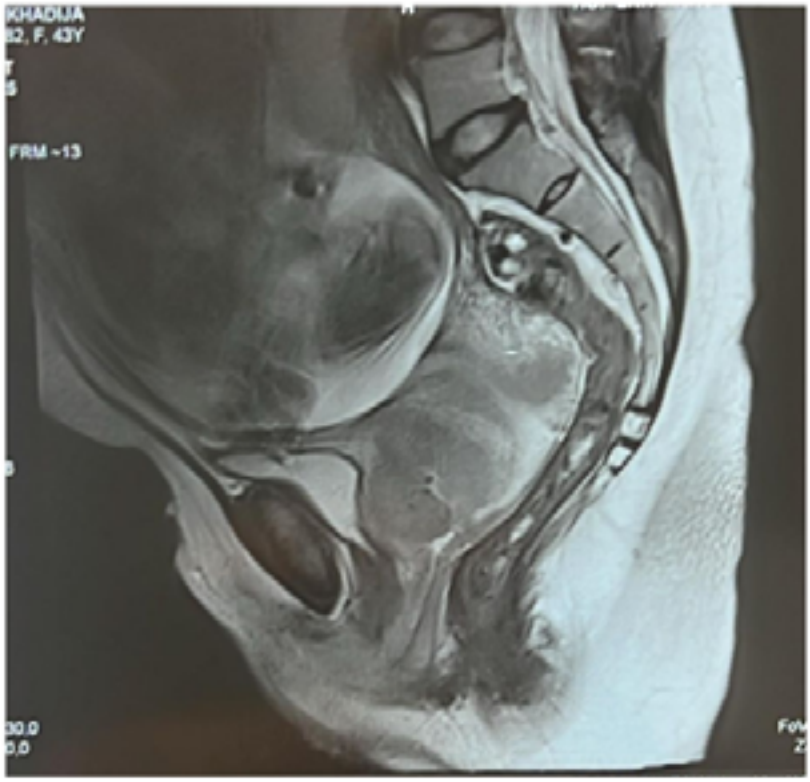

Figure 2: Tumoral process involving the uterine cervix, showing signs of invasion, measuring 86 × 62 mm with an extension of 50 mm.

4. Introduction

Cervical cancer is one of the most common gynaecological cancers, particularly in low-resource countries. Its association with pregnancy is rare, with an estimated incidence ranging from 1.2 to 10 cases per 10,000 pregnancies. Advanced stages, particularly stage IV (locally extensive or metastatic disease), are even rarer and pose significant medical, ethical, and therapeutic challenges. Treatment strategy depends on several factors, including the FIGO stage at diagnosis, gestational age, the patient's desire to continue the pregnancy, her general condition, availability of therapeutic options (surgery, radiotherapy, chemotherapy), and local medical resources.

5. Discussion

Invasive cervical cancer during pregnancy-especially stage IV-is a rare but complex situation. It presents a major therapeutic challenge requiring a multidisciplinary approach to balance maternal survival with fetal prognosis [2,3,10]. Stage IVB is defined by the presence of distant metastases beyond the pelvis. The most common sites include the lungs, liver, bones, supraclavicular or mediastinal lymph nodes, and in some cases, brain metastases. This stage is associated with a poor prognosis, with a 5-year survival rate of less than 15% in the general population. When it occurs during pregnancy, management becomes even more complicated. Diagnosis is confirmed through histological analysis, either via targeted biopsy or conization, ideally performed during the first trimester. Magnetic resonance imaging (MRI) without gadolinium injection, using diffusion-weighted sequences, is essential to assess parametrial and nodal spread [2,3,9]. The therapeutic goals are to prolong maternal survival, limit tumour progression, maintain the pregnancy until fetal viability (if desired by the patient), while avoiding harmful treatments for the fetus. The initial workup should include pelvic MRI, non-irradiating thoraco-abdominal imaging (such as liver ultrasound or, if necessary, CT scan with fetal shielding), and targeted biopsies if metastases are suspected (lymph nodes, liver, etc.). Management then depends on gestational age. Before 14-16 weeks of amenorrhea, if the pregnancy is not desired, therapeutic termination may be proposed, followed by standard treatment with chemoradiotherapy or surgery [2,6]. If the pregnancy is desired, neoadjuvant chemotherapy (NACT) may be started as early as 14 weeks, using cisplatin or carboplatin, with or without paclitaxel [4,5,7,8]. Between 14 and 32 weeks, a neoadjuvant chemotherapy regimen administered every three weeks based on cisplatin or carboplatin, optionally combined with a taxane is recommended. Clinical and ultrasound monitoring is required with each cycle [2,4,7], along with regular reassessment via MRI and clinical examination every six weeks [1,4]. Delivery should be scheduled via caesarean section between 34 and 36 weeks of gestation. Chemotherapy must be stopped two to three weeks prior to delivery to reduce neonatal risks [4,5,9]. A course of antenatal corticosteroids is indicated to promote fetal lung maturity, and low molecular weight heparin (LMWH) is recommended postpartum [4]. After delivery, treatment can resume following standard protocols for stage IVA or IVB disease, including chemoradiotherapy, possibly associated with lymphadenectomy [2,1]. Radical hysterectomy may be considered in cases with good local control [3,5]. It is important to note that certain treatments commonly used for advanced cervical cancer are strictly contraindicated during pregnancy. These include bevacizumab (anti-VEGF), immune checkpoint inhibitors (PD-1, CTLA-4), and extensive pelvic radiotherapy [2,5,6,10,11]. Stage IVB is typically associated with a median survival of 12 to 18 months. Although pregnancy does not appear to worsen disease progression directly, it can delay the initiation of key treatments such as radiotherapy or immunotherapy, complicating overall management.

6. Conclusion

Stage IV cervical cancer diagnosed during pregnancy represents a rare but formidable clinical scenario, due to both maternal morbidity and mortality and the complexity of medical decision-making. Stage IVB, in particular, presents major therapeutic dilemmas, as the required aggressive treatments-such as radiotherapy or targeted therapies-are often incompatible with continuing the pregnancy.

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