



## Management of Pregnancy in a 24 Year Old Woman with Cervical Cancer in Resource Limited Settings: Case Report

Elichilia R Shao<sup>1\*</sup>, George Semango<sup>1</sup>, Kevin V Nandonde<sup>2</sup> and Richard Rumanyika<sup>2</sup>

<sup>1</sup>Kilimanjaro Christian Medical Centre, Tumaini University Makumira, Moshi, Tanzania

<sup>2</sup>Department of Microbiology/Immunology, Catholic University of Health and Allied Sciences, Mwanza, Tanzania

\*Corresponding author: Elichilia R Shao, Kilimanjaro Christian Medical Centre, Tumaini University Makumira, PO BOX 2240, Moshi, Tanzania, E-mail: [elichilia2004@yahoo.co.uk](mailto:elichilia2004@yahoo.co.uk)

### Abstract

**Introduction:** Cervical cancer (CaCx) among immune competent young women is quite rare. Its management is a challenge especially in resource limited settings. We report management of pregnancy in a 24 year old woman with CaCx in Mwanza, Tanzania.

**Case presentation:** A 24-year-old Tanzanian black women gravida three at 23 weeks of gestational age (GA) came to our hospital complaining of heavy vaginal bleeding mixed with foul smell discharges for about 2 months. Speculum examination revealed fungating ulcerative cervical lesion and punch biopsy performed. Histological diagnoses were moderately differentiated invasive squamous cell carcinoma of the cervix with no local metastases or lymph node or other signs of cancer spreading present (stage 1B). The Caesarean section (C/S) were done at 34weeks GA due to ante partum haemorrhage, a live baby girl of 1.7 kg weight was extracted. Postoperative period was uneventful; the patient was then referred to Ocean road cancer institute in Dar es Salaam Tanzania for radiotherapy.

**Conclusions:** In summary, cervical cancer remains an important but rare condition in pregnancy. Management should be individualized following careful evaluation and counselling of the patient.

### Keywords

Squamous cell carcinoma, Sexual debut, Human papillomavirus, Caesarean section.

### Abbreviations

GA- Gestational age, CaCx- Cervical Cancer, C/S- Caesarean Section, HPV- Human Papilloma Virus, WHO-World Health Organization, SSA- Sub-Saharan Africa, BMC- Bugando Medical Centre, WBUCHS- Weil Bugando University College of Health Science.

### Introduction

Cervical cancer (CaCx) is the second most common cancer among women globally with approximately half a million new cases each year. The causative agent of CaCx is virus called human papillomavirus (HPV) which also cause other conditions in both men and women worldwide [1]. The natural history of CaCx is well

understood hence its control is possible especially through vaccination of young girl before sexual debut or early screening of all women at their reproductive age [1-3]. Molecular and epidemiological studies grouped HPV into high and low risk types basing on its oncogenic potential. Globally more than 70% of CaCx are caused by high risk HPV namely type 16 and 18 while the rest is contributed by other associated factors [4]. Other associated factors includes early sexual debut, multiple sexual partners without using condoms, number of lifelong sexual partners, fully pregnancy before age of 17 yrs and history of using oral contraceptive for more than five years [5].

Despite of high prevalence of CaCx in Sub Saharan Africa (SSA), no standard guidelines of management plan for pregnant women with different stages of cervical cancer [6,7]. Selection of treatment modalities and timing of intervention is a very big challenge in SSA where the treatment choice is very limited, costful and very far to reach [8]. In Tanzania data on incidence of CaCx during pregnancy is limited so its management protocol.

We report clinical presentation, histological diagnosis, and management of 24-year-old pregnant women with CaCx stage 1B which was delivered by caesarean section and followed by radiotherapy (Figure 1).

### Case Presentation

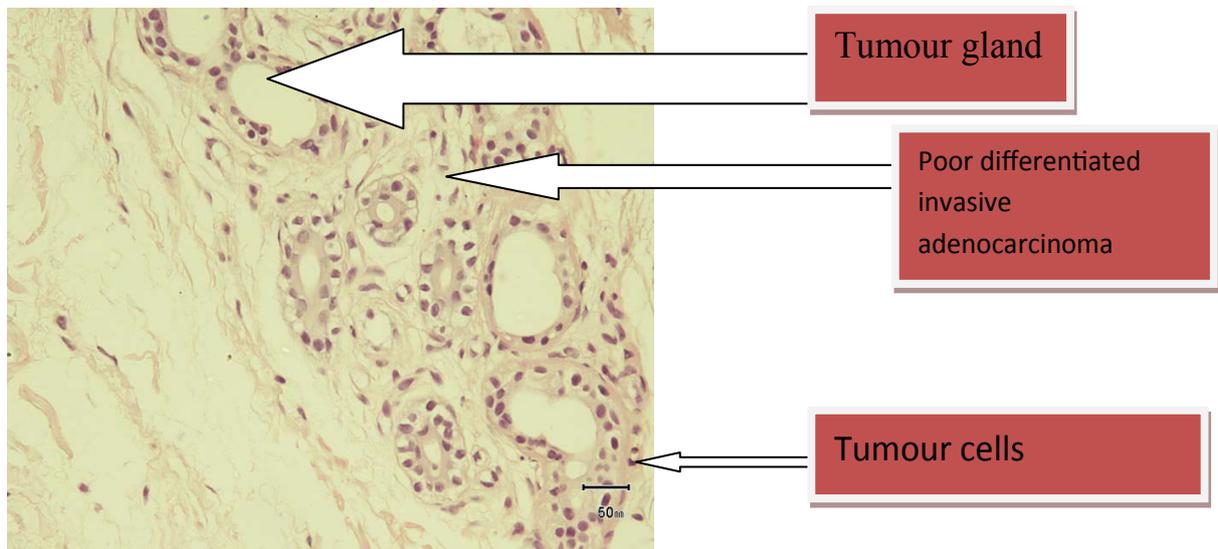
A 24-year-old pregnant black Tanzanian female presented to our hospital complaining of heavy vaginal bleeding mixed with foul smell discharges that she had been experiencing for eight weeks. Past medical and social history was a factor because of early sexual debut at 9 yrs, multiple sexual partners without using condoms and she was using oral contraceptives for a decade. Her obstetric history shows that she had her fully pregnancy before age of 17 yrs. She was doing well until eighth weeks prior to admission when she developed vaginal bleeding associated with contact and also there was foul smelling per vaginal discharge. The bleeding was markedly when doing sexual intercourse. The bleeding was heavy at the beginning later on after four weeks was mixed with clots.

She booked at 13 weeks gestation age and her haemoglobin on booking was 10.6 gm/dl and BP was 135/85 mmHg. She attended two times antenatal clinic where her sero status for HIV was negative and

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**Figure 1:** Histological finding showing Cervical Cancer stage 1B from female patient aged 24 years old from Bugando Medical Centre, Mwanza Tanzania.

Tetanus Toxoid was given. Her periods started at 11 years of age and menstrual bleeding takes 3 days every 28-30 days and she has painful menses. No history of sexually transmitted infections until this one she presented to us with CaCx stage 1B. Previously, she was delivered twice by spontaneous vaginal delivery with no complication reported. Her first pregnancy was at the age of 13 yrs, the second one was at 15 yrs and the third one was at 24 yrs which presented to us with cervical cancer at stage 1B.

During admission on general examination she was a fairly looking lady with good nutritional status, mild pale, and had no oedema of lower limb. The blood pressure was 110/70 mmHg, pulse rate 80 beats/min, respiratory rate 22 cycles/min and a temperature of 36.7°C. On abdominal examination, the abdomen was distended, fundal height of 22/49, with positive fetal heart rate and movements. On speculum examination fungating mass was seen in the cervix which bleeds easily on touch. Specimen was kept into a container with 10% formalin for preservative and transportation to the histopathology for analysis. No local metastases in the vagina or inguinal lymph nodes. Invasive cancer can only be identified microscopically, all superficial invasion limited to stromal with maximum depth of 5 mm, are stage Ib cancers; invasion is limited to measured stromal invasion with a maximum depth of 5 mm and not wider than 7 mm (Figure 1). Per rectum examination showed that the sphincters are intact, normal mucosa and there are no features of local spread. Punch biopsy was taken for histopathology and CaCx stage 1B in pregnancy at 23 weeks gestation age was reached.

Management plan started by counselling patient was about the possibility of radiation after delivery against termination of pregnancy. She agreed on delivering through C/S after long discussion to explain why that plan was made and later was discharged home in stable condition for outpatient follow up. Repeated ultra sound showed posterior placenta but not low lying, adequate liquor volume and estimated fetal weight was 1.7 kg in cephalic at 30 weeks gestation age.

Management Plan discusses with the patient was to wait for the delivery and then for radiation; but she continued with normal antenatal clinic and haematinics. She came again at 34 weeks GA with history of painful profusely and heavy vaginal bleeding with clots started 5 hours prior to hospital visit. Clinically she was not pale, not dyspnoeic; BP 120/70 mmHg, pulse rate 84 per minutes and respiratory rate of 24 per minute. On abdomen examination showed distended and fundal height of 34 weeks, baby was in longitudinal cephalic and no contraction noted. On speculum examination there was active bleeding from the cervical lesion, attempt of parking failed. We had a conclusion of ante partum haemorrhage at 34 weeks due to invasive Squamous Cell Carcinoma. Preoperative prophylactic antibiotics were given (intravenous Ampicillin 1g stat

and metronidazole 500 mg).

Intraoperatively under spinal anaesthesia, we did an upper segment uterine incision to avoid the tumour, and a live baby girl weighing 1.7 kg was delivered with an Apgar score of 4 and 6 after first and fifth minutes respectively. She received intravenous ceftriaxone 1g and metronidazole 500 mg intraoperatively then continued with the same drugs postoperatively for 5 days. Examination under anaesthesia was done in lithotomy position where necrotic fungating mass on the cervix extending to the vagina about ¾ of the vaginal canal was obliterated. Actively bleeding site was cauterized and haemostasis achieved. Postoperative diagnosis was CaCx stage IIB. She stayed in the ward for 7 days without any complication and discharged/referred to ocean road hospital for radiation.

Post operative care she was transferred to the ward for observation. On the fifth day she was improving and was discharged and instructed to attend outpatient clinic in monthly bases and for the histopathology result.

## Discussion

Invasive cervical cancer during pregnancy is rare but is a dilemma for women and their physicians. The pregnancy does not seem to influence the prognosis of CaCx [3,9]. Therapeutic delay could be proposed to selected patients diagnosed at the end of the second trimester or at the beginning of the third trimester, with a small tumour (< 2 cm) and negative nodes [10]. CaCx is one of the most common malignancies in pregnancy, with an estimated incidence of 0.8 to 1.5 cases per 10,000 births [11,12]. One to three percent of women diagnosed with CaCx are pregnant or postpartum at the time of diagnosis [9,10]. About one-half of these cases are diagnosed prenatally and the other half is diagnosed within 12 months of delivery [11].

The presenting symptoms and signs of CaCx in pregnancy are dependent upon the clinical stages and lesion size. Patients with symptomatic stage IB disease presented with abnormal vaginal bleeding or discharge as in this case; clinical manifestations in patients with more advanced disease also included pelvic pain, sciatica-type leg pain, flank pain, chronic anemia, and shortness of breath [9,11].

The diagnosis of cervical cancer is often delayed in pregnant women since many of these symptoms are similar to those associated with a normal pregnancy. The average duration of symptoms before diagnosis of cervical cancer in pregnancy is 4.5 months [9]. The principles of detection, diagnosis, staging, and treatment for cervical cancer are largely the same in the pregnant and non pregnant patient. However, certain diagnostic maneuvers and management decisions are altered or delayed by the presence of a concomitant gestation,

depending on the gestational age and degree of disease at the time of diagnosis.

Most patients are diagnosed at an early stage of disease [13,14]. Stages, the course of disease, and prognosis of CaCx in pregnant patients are similar to those of non pregnant patients [10,11]. Treatment should be individualized and based on the stage of cancer, the woman's desire to continue pregnancy, and the risks of modifying or delaying therapy during pregnancy. Should invasive carcinoma be discovered in early pregnancy and thought to be unsuitable for primary surgical therapy, termination of the pregnancy is usually carried out with the method depending on the gestational age and is followed by radiotherapy. Certain patients with early stages of disease may be treated primarily with radical hysterectomy and pelvic lymphadenectomy [10,11]. If the carcinoma is discovered in the later weeks of pregnancy, a delay in treatment is considered permissible to allow for viability of the fetus [12]. For those patients diagnosed in the latter stage of pregnancy with a viable fetus, delivery by C/S is usually recommended although studies have not shown that vaginal delivery has produced a higher morbidity or decreased survival in patients delivered by this way [10-12].

In summary, management of pregnancy in CaCx need multidisciplinary approach [13,14]. Current information suggests that pregnancy may or may not adversely affect stage at diagnosis or prognosis. However, there is inadequate evidence base on whether delay of treatment to facilitate delivery is safe beyond stage 1B. Management should be individualized following careful evaluation and counselling of the patient.

## Consent

Written informed consent was obtained from the patient herself to publish this case report and any accompanying images. The WBUCHS/BMC ethics review board provided the approval to publish this case report and any accompanying images. A copy of the written consent is available for review by the Chief Editor of this journal.

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## Authors' Contributions

KVN and RM managed the patient and collected all clinical information. GS and ERS performed histological analyses. ERS wrote the manuscript. All authors read, edited, and approved the final manuscript.

## Competing Interests

The authors declare that they have no competing interests.

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