ECONSPEAK: A Journal of Advances in Management IT & Social Sciences,
Vol. 8, Issue 9, Sep 2018 Impact Factor 5.132 ISSN: (2231-4571)
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# Preventing and Treating Cervical Cancer during Pregnancy: A Specific Guide of Delhi NCR Hospitals

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**Abstract- Cervical cancer is, essentially, uterine cancer. The ailment begins when the cells in the cervix begin unhindered multiplication. They develop and enter a pre-cancerous stage, from where they quickly begin to multiply. In certain cases, these cancer cells grow very quickly within a year, while normal case reports show that it takes years for the cells to migrate from pre-cancer to cancer.**

**Treatment for cervical cancer during pregnancy has historically been avoided: the normal course of action was termination of pregnancy during the first two trimesters, or extension of treatment until fetal maturity in the third trimester, followed by regular postpartum care. Preservation and diagnosis of pregnancy during pregnancy has become more normal over the last decade. In this current study, we intend to summarize available evidence and recommendations on the treatment of cervical cancer during pregnancy. This article delineates explore theexact incidence of cervical cancer cases in pregnant women is not known, undoubtedly is the most common gynecological malignancy diagnosed during pregnancy. It is also identify Cervical cancer diagnosed during pregnancy remains a therapeutic challenge for physicians in Delhi NCR.**

**Keywords: Cervical Cancer,Pregnancy, Treatment, Pre-Cancer, Cells.**

## 1. Introduction

Cancer is a disorder in which cells develop out of control within the body. Cancer is often named for the body part where it starts, even though it spreads later on to other areas of the body. This is called cervical cancer as cancer occurs in the cervix. The cervix is connected to the upper part of the uterus by the vagina (birth canal). When a woman is pregnant, the uterus (or womb) is where a baby develops.

Both women have the possibility of developing cervical cancer. It more often occurs in women over 30. The principal cause of cervical cancer is long-lasting infection with some forms of

human papillomavirus (HPV). HPV is a viral virus, transmitted during sex from one person to another. At some point in their lives, at least half of sexually active people will have HPV, but few women will get cervical cancer.

Cervical cancer (CC) is the most well-known gynecological cancer during pregnancy with an expected occurrence of 0.1– 12 cases for every 10,000 births. The occurrence of strange cervical cytology during the pregnancy time frame is around 5– 8%. Around 1– 3% of CC patients are diagnosed during or after pregnancy. Stage-I illness is multiple times more typical in pregnant than non-pregnant patients, which might be clarified by routine pre-birth Pap screening. Tragically, the rate of CC diagnosed during pregnancy is misty because of an absence of sorted out information accumulation in Delhi NCR.

Even though the administration of CC diagnosed during pregnancy seems, by all accounts, to be a critical difficulty for the patients and the experts, the forecast of CC isn't affected by pregnancy. The uncommonness of the malady and absence of randomized control examines have brought about an absence of set up treatment rules.

The administration of CC, for the most part, pursues the rules for the non-pregnant infection state, master suppositions and restricted case reports. Already, CC diagnosed during pregnancy was treated profoundly, with the end of the pregnancy and prompt inception of treatment. In any case, the infection is presently overseen all the more moderately during pregnancy, and the treatment is custom-made by different variables. For the most part, the infection is overseen as per malady stage, gestational time of pregnancy and the patient's choice concerning the continuation of pregnancy. In this audit, we present current conclusion and the board conventions for pregnancies confounded by CC [1].

## 2. DIAGNOSIS AND TREATMENT OF CERVICAL CANCER IN PREGNANT WOMEN

Complicated pregnancy with cervical cancer refers to confirmed cervical cancer during the current pregnancy, as well as to cases diagnosed 6–12 months after delivery. The probability of a difficult pregnancy with cervical cancer is small. At the time of diagnosis, approximately 1%-3% of women diagnosed with cervical cancer are pregnant or postpartum. Approximately one-half of these cases are diagnosed prenatally and the other half is diagnosed after delivery within 12 months.

Cervical cancer is one of the most common pregnancy malignancies, with an approximate incidence of between 0.8 and 1.5 cases per 10 000 births. In India, four cases of pregnancy complicated by cervical cancer are reported to be per 100 000 patients with cervical cancer. Multicenter data from 13 hospitals in 12 provinces in India showed that for the same gestation

period the incidence of cervical cancer during pregnancy was 0.016 per cent (52/330 138). It remains controversial whether pregnancy will increase cancer progression.

Some scholars have found that the levels of estrogen, progesterone, and human chorionic gonadotropin during pregnancy are positively associated with human papillomavirus (HPV) 16 and HPV 18 infections, which indirectly indicate that pregnancy may encourage the development of cervical cancer. Some studies have shown that the lymphatic circulation and blood flow of pregnant women's reproductive organs increases, the body's immunity decreases after delivery in the early stage of pregnancy and cervical dilation, and other factors that speed up tumor metastasis, thereby accelerating the development of cervical cancer[2].

**Clinical manifestations**

The clinical manifestations of cervical cancer in pregnant women have to do with the clinical stage and tumor diameter. Early-cervical cancer pregnancy usually has no visible clinical signs. A few symptomatic patients, however, often experience vaginal discharge with stench, purulent or bloody secretions and frequent vaginal bleeding. Late-cervical cancer pregnancy primarily causes discomfort caused by tumors or chronic anemia induced by frequent menstrual bleeding in the long term.

The above symptoms are often mistaken for other diseases during pregnancy or puerperium symptoms, due to the fact that these patients are either pregnant or postpartum. Therefore, one should be very careful in pregnant patients and postpartum patients with vaginal bleeding, and gynecological examination and cervical exfoliation cytology screening should be carried out where necessary.

**Screening and diagnosis**

Cervical cancer screening also follows the "three-stage model," i.e., cervical cytology, colposcopy, and cervical biopsy. Cervical cytology is the first option for prompt cervical cancer diagnosis. During pregnancy the test does not pose a threat to mothers and babies. Previous studies have shown that in pregnancy, the accuracy of cervical cytological diagnosis is close to that of non-pregnancy.

Recent studies have shown, however, that changes in maternal estrogen and progesterone levels contribute to glandular cervical mucosal hyperplasia, squamous-columnar junction migration, vigorous proliferation of basal cells, abnormal cell morphology, and nuclei enlargement, which are easily misdiagnosed as extremely squamous intraepithelial lesions or even invasive cancers. Given the sensitivity of the cervix during pregnancy, it is advised that skilled pathologists make cervical cytology smears, which can then analyze and conclude on the film in order to minimize misdiagnosis.

Owing to the changes in maternal hormone levels during pregnancy, the cervical picture under colposcopy is often difficult to recognize. Hence it is best to undergo colposcopy during the first and second trimesters of pregnancy. If the early colposcopy is not sufficient, then after 20 weeks of pregnancy it should be repeated. The colposcopic indications include:

1. vaginal bleeding or contact bleeding excluding obstetric factors;
2. obvious abnormalities in the cervix noted during gynecological examination;
3. lesions suspicious of being an invasive cancer;
4. cervical cytology screening met the criteria of referral colposcopy:
    i. Cervical cytology diagnosed as atypical squamous cells of undetermined significance (ASC- US). If both ASC- US and HPV are negative, patients with HPV- positive can be reexamined at 6 months postpartum;
    ii. Patients with low- grade squamous intraepithelial lesion (LSIL); and
    iii. Atypical squamous cells whereby high- grade squamous intraepithelial lesion (ASC- H) cannot be excluded; and
    iv. Pregnant women with high- grade squamous intraepithelial lesions (HSIL), atypical glandular cells (AGC), and above.

Cervical biopsy may be taken for pathological analysis by colposcopy or naked eye for suspected high-grade lesions of the cervical or suspected cancers. Cervical biopsy does not increase the frequency of complications during pregnancy, abortion and premature delivery, but during pregnancy curettage of the cervical canal does increase the risk of abortion and premature delivery [3].

The procedure is also prohibited during pregnancy. The cervix is also vulnerable to bleeding during pregnancy. If the biopsy site is too big or too small, it can cause significant bleeding or even abortion. To mitigate these risks, some scholars have suggested that the biopsy depth should be less than 1 cm, and that the biopsy should not be too high, so that bleeding can be stopped easily (if any).

## 3. TREATMENT OF CERVICAL INTRAEPITHELIAL LESIONS DURING PREGNANCY

Around 2/3 of cervical lesions in patients with LSIL will spontaneously subside during pregnancy, a small number of cases development, according to related research studies. Around 1/2 of cervical lesions spontaneously subside in patients with HSIL, and patients with no

improvement have not yet been found, indicating that pregnancy will rarely increase the development of cervical intraepithelial lesions. The 2018 version of an expert consensus on the treatment of cervical cancer during pregnancy suggests:

1. Patients with LSIL cervical histology (CIN1 grade) during pregnancy may be adjourned for examination to 6 weeks postpartum;

2. Cervical histology HSIL (CIN2/3 grade) patients during pregnancy should be tested every 12 weeks after excluding invasive cervical cancer, and cervical cytology and colposcopy should be re-evaluated up to 6 weeks after the birth.

3. If re-examination of pregnancy or postpartum suggests that the disease progresses to suspected invasive cancer, regular biopsy should be taken.

4. If strongly suspected of invasive cervical cancer, electrosurgical excision in the cervical loop (LEEP) or conization of the cervical cold knife (CKC) can be done to make a definitive diagnosis rather than treatment.

Cervical cancer pregnancy care has not yet been well developed, either in China or abroad; however, it can be treated depending on the clinical stage and whether or not the pregnancy will be able to continue.

The procedure is the same as that of non-pregnant women with cervical cancer, if pregnancy is to be terminated. Specific care can be combined with cervical cancer staging, tumor size, gestational weeks, fetal development and involvement of the pelvic lymph node for those patients that remain pregnant [4].

## 4. THE EFFECT OF NEOADJUVANT CHEMOTHERAPY ON FETUS AND NEWBORN

### Influences on the fetus

The effect of chemotherapy on the fetus depends on the dose of drugs that pregnant women receiving chemotherapy during pregnancy transfer to the fetus. Calsteren et al (2010)[19] investigated the placental transport of chemotherapeutic drugs widely used in models of pregnant baboons. The findings showed that the average concentration of carboplatin in baboon fetal plasma was 57.5% of the maternal body; in addition, the concentration of paclitaxel in fetal umbilical cord blood was 15% of the maternal body after 3 hours of paclitaxel infusion; after docetaxel transfusion, the concentration of docetaxel in fetal umbilical cord blood was 5%-50%. After trastuzumab injection, the transplacental transmission rate of trastuzumab dropped from 85 per cent to 3 per cent at 2 and 26 hours. Kohler et al (2015) proposed that a platinum placental filtration mechanism may occur because the concentrations of platinum in

fetal cord blood and amniotic fluid were 23%-65% and 11%-24% respectively in maternal blood. Chemotherapy can act directly on the growing fetus, or the placenta can act indirectly on the growing fetus [5].

Chemotherapy may affect the fetal eyes, genitals, hematopoietic system and central nervous system following the development of fetal organs. The suppression of the maternal and fetal bone marrow induced by chemotherapy can also lead to anemia, which in turn affects fetal growth.

## 5. Conclusion

India has the highest body count from cervical cancer compared to any other country. Deaths from this preventable disease will increase, unless women's perceptions change, according to a new study. One in five women worldwide suffering from cervical cancer belongs to India which has the world's largest number of cervical cancer patients. The disorder absorbs money in the form of care, non-medical expenses and lost productivity at a alarming pace. While the most commonly diagnosed cancer in Indian women is cervical cancer, age-adjusted incidence rates range from 8.8 per 100,000 women to 10.1 per 100,000 women.

In India, cervical cancer accounts for 26.7 per cent of the incidence worldwide per year and 72,825 Indian women die from cervical cancer. More than 1, 32,000 women are diagnosed with cervical cancer per year as a major cause of morbidity and mortality, indeed 200 women die every 24 hours in India as a result of cervical cancer.

The cervix is the lower part of the uterus to which the vagina is linked. Cervical cancer occurs in the cervix cells. Human papillomavirus strains (HPV), a sexually transmitted infection, play a part in causing most cervical cancers. The illness starts when healthy cells develop a mutation that contributes to uncontrolled cell development. Such cells form a tumor that invades surrounding tissues. Three types of cervical cancers include squamous cell carcinomas, adenocarcinomas and adenosquamous carcinomas. Squamous cell carcinomas arise from the exocervix cells, while adenocarcinomas arise from cells in the gland. Under the microscope, the cancer cells are said to have squamous cell characteristics. Adenosquamous carcinomas include carcinomas in both the squamous cells and adenocarcinomas. Various treatment options for cervical cancer include cryosurgery, laser surgery, basic hysterectomy, radical hysterectomy, and trachelectomy. Diagnosis of cervical cancer is based on cystoscopy, proctoscopy, anesthetic evaluation and imaging studies such as computed tomography (CT), magnetic resonance imaging (MRI), intravenous urography, and positron emission tomography (PET scan).

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