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Vulval and vaginal cancer in pregnancy

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Lower genital tract malignancy during pregnancy is rare. Due to the rarity of this condition, the best evidence in its management is based on case reports. The management of the lower genital tract malignancy is influenced by factors including oncological factors, maternal and foetal effect of treatment, and other religious and ethical issues in a multidisciplinary approach. In most cases, the woman can continue with the pregnancy. This chapter describes the management of vaginal and vulval cancer during pregnancy based on available case reports.

Vulval cancer

Vulval cancer is rare. It accounts for 4% of all female genital tract malignancies with an annual incidence of four per 100,000 females in population statistics [1]. Vulval cancer is typically a disease of the elderly. However, an increased incidence of vulval cancer in younger women has been observed. A population-based study in the UK has shown an overall increase in the incidence of vulval cancer in younger women aged between 20 and 69 years [2]. The increased incidence of vulval cancer seemed to be alongside the increased incidence of vulva intraepithelial neoplasia (VIN) [3]. This is suggestive that the pathogenesis of disease in young women is likely due to the exposure to human papillomavirus (HPV), which is the causal factor of the precursor of vulval cancer – VIN [4,5].

The increased incidence of vulval cancer in younger women during the reproductive age group means that we would encounter women who develop vulval cancer during the course of their pregnancy. This is, however, fortunately rare with unknown incidence. A recent systematic review article identified 36 case reports on vulval cancer in pregnancy between 1955 and 2014 [6].

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Vulval cancer is more common in multiparous than nulliparous women. About 60% of the cases were diagnosed in women aged <35 years. The most common histological subtypes of vulval cancer in pregnancy are squamous cell carcinoma, followed by sarcoma, adenocarcinoma and melanoma. A total of 60% of patients present with stage 1 disease with 3.2% presenting during the first trimester, 54.8% during the second trimester, 38.7% during the third trimester and with 3.2% presenting during the post-partum period.

Vaginal cancer

Vaginal lesions usually arise as secondary spread of malignancy from other adjacent organs, for example, cervix, endometrium, bowel, ovary, vulva and urinary tract. Primary vaginal cancer is very rare. It accounts for 1% of all female genital tract malignancies [7]. Vaginal cancer is more prevalent in postmenopausal women and therefore diagnosis in pregnancy is extremely rare. Only 12 cases have been reported since 1963 [8].

The most common subtype of primary vaginal cancer is squamous carcinoma (80–90%) followed by adenocarcinoma, sarcoma and melanoma. All case reports of vaginal cancer in pregnancy were squamous carcinoma [8]. Primary vaginal cancer of clear cell subtype is associated with vaginal cancer in adolescence and young females who were exposed to diethylstilbestrol in utero.

Stage 1 disease was diagnosed in 50% of case reports involving vaginal cancer during pregnancy. The remaining 50% were stage 2 disease. In the case reports, 33% of cases presented during the first trimester, 25% during the second trimester and 42% during the third trimester.

Diethylstilbestrol exposure in utero

Between 1940 and 1970, diethylstilbestrol (DES) was used on pregnant women to prevent miscarriages, premature labour and related complications during pregnancy [9]. It was, however, found that daughters of women who used DES during pregnancy have 40 times increased risk of developing vaginal clear cell carcinoma compared to unexposed women, and about 0.1% of those who were exposed to DES in utero would develop clear cell carcinoma of the lower genital tract between their teens and 20s [9]. The risk of vaginal clear cell carcinoma could persist in DES in utero exposed women up to 40 years of age.

Signs and symptoms

The following are the common symptoms at presentation of vulval and vaginal cancer during pregnancy:

- Vulval or vaginal mass/lump
- Pruritus
- Discharge
- Pain
- Post-coital bleeding

In a systematic review, a delay in diagnosis of vulval cancer during pregnancy was observed in several case reports [6]. A delay in the diagnosis of cancer of the lower genital tract can be due to the following reasons, which could have a detrimental effect on the patient's prognosis: (i) symptoms of vaginal discharge or bleeding can mimic physiological changes during pregnancy, (ii) low index of suspicion for malignant disease in this age group, (iii) hesitancy for invasive intervention during pregnancy, that is, biopsy. Therefore, a thorough history and clinical examination on pregnant women presenting with persistent or worsening symptoms is vital.

As in non-pregnant state, any suspicious lesion, presented in all trimesters should be biopsied to obtain a histological diagnosis prior to offering treatment. During pregnancy, vulval and vaginal cancer are likely an HPV-related condition, and it would be beneficial to screen this group of women for cervical intraepithelial neoplasia (CIN) and other systemic immunosuppressive risk factors such as HIV and smoking status.