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Premalignant disease in the genital tract in pregnancy

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Cervical intraepithelial neoplasia (CIN) is the most common premalignant disease of the lower genital tract encountered during pregnancy. As in the non-pregnant state, abnormal cytology should be referred for colposcopy. However, the role of colposcopy in pregnant women is to exclude invasive cancer by visual inspection and defer biopsy and definitive treatment until the postpartum period. Colposcopic exclusion of invasive disease is the only absolute indication for conisation in pregnancy. It is now evident that treatment for CIN outside of pregnancy, that involves >15 mm deep excision is associated with an increased risk of preterm delivery. Vulval intraepithelial neoplasia (VIN) and vaginal intraepithelial neoplasia (VaIN) rarely present in women of childbearing age; nevertheless, medical management should be postponed until after delivery, unless symptoms are particularly severe.

Cervical Intraepithelial Neoplasia

Introduction

CIN is common in women of reproductive age. Moreover, in the UK, the peak incidence of CIN3 is around the age of 30, which coincides with the mean age of primigravid women. As such, it is expected

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that clinicians in the colposcopy clinic will encounter pregnant women with CIN. The incidence of CIN complicating pregnancy is 2000–8000 per 100,000 pregnancies [1].

Cervical screening in pregnancy

Cervical screening aims to reduce the incidence of and mortality from cervical cancer through the detection and effective treatment of premalignant lesions. It is widely accepted that in regions where systematic population-based screening programmes have been established, the incidence and mortality rates of invasive cervical cancer have reduced as a direct consequence, for example, in British Columbia, the UK and the Scandinavian countries [2–4].

The UK National Health Service Cervical Screening Programme (NHSCSP) [5] advocates that routine screening is not performed antenatally and should be deferred until after delivery. This is because cytological interpretation of cervical smears collected during pregnancy is difficult due to pregnancy-related changes [6] and treatment for any underlying CIN is not recommended during pregnancy. Cervical sampling may also lead to minor vaginal bleeding, which can cause anxiety to the pregnant woman. If, however, a woman with cytological abnormalities becomes pregnant in the interim, follow-up should not be postponed until after delivery. Under these circumstances, a repeat cervical sample should be taken in the second trimester, or it may be more appropriate to perform colposcopy [5]. Cervical sampling and colposcopy are not associated with adverse pregnancy outcomes such as miscarriage or rupture of membranes [7,8].

In countries where an organised screening programme is not available, screening by cytological examination or visual inspection of the cervix with acetic acid may be offered during pregnancy. Although this practice is controversial, supporters identify pregnancy as an ideal time to perform opportunistic screening in women who might not otherwise be screened [9].

Colposcopy in pregnancy

The indications for colposcopy for women with cytological abnormalities during pregnancy are essentially the same as for non-pregnant women. The need for colposcopy during pregnancy may arise as a result of:

- Required follow-up of histologically confirmed CIN in women who became pregnant prior to definitive treatment.
- Abnormal cervical cytological results from opportunistic screening at the time of the booking visit.
- Abnormal cervical cytological results in women who have become pregnant while awaiting referral to colposcopy.

It may also arise from the need to exclude early cervical cancer in women who have repeated antepartum haemorrhage in the absence of another obvious cause.

Colposcopy is a safe and effective method for the further evaluation of cytological abnormalities; however, procedural difficulties can arise when performing colposcopy in pregnancy. Firstly, vaginal wall laxity is common, and secondly, the cervix is more vascular during pregnancy leading to increased friability and the possibility of traumatic bleeding [10,11].

Colposcopic appearance of CIN

The colposcopic appearances of CIN in pregnancy are generally similar to that of the non-gravid cervix. In non-pregnant women, acetic acid (3 or 5%) is applied to the cervix under direct vision, and the colposcopist needs to differentiate among normal epithelium, low-grade (CIN1) and high-grade (CIN2/3) disease using pattern recognition. A high degree of skill is required to discriminate