

## Cervical Smear in Pregnancy: The Zaria Experience

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### Introduction

Well-organised screening programmes can substantially reduce mortality from cervical cancer and the incidence of invasive disease in the target population. <sup>1</sup> The aim of screening for cervical cancer is to identify and treat pre-invasive cancer. Therefore, women should have cervical smears at any opportunity, when they present to antenatal clinics, family planning clinics and other gynaecologic clinics <sup>2</sup> for other problems.

Cancer and pregnancy result in 2 opposing emotional reactions in young women; one leads to a joyous elation and the other dismay and horror. <sup>3</sup> Cervical invasive carcinoma in pregnancy has been reported <sup>4</sup> with an incidence of 1:2, 500 pregnancies in large centres and an incidence of carcinoma in-situ of 1:750 pregnancies. <sup>5</sup>

The aim of this report is to determine the pattern of abnormal cervical smears in

pregnancy and the relationship between cytopathologic reports and lower genital tract infections.

### Patients and Methods

Fifty patients were recruited from the antenatal booking clinics of the Ahmadu Bello University Teaching Hospital, Zaria over a 7-month period and were prospectively studied.

The patients were counselled and had a complete clinical evaluation. First cervical smears were taken at the antenatal booking clinic and the patients were followed up at the antenatal clinic. Particular note was taken of any vaginal discharge suggestive of infection, which was investigated and treated accordingly. Any patient with a history of vaginal bleeding had a careful speculum examination of the cervix and further smears taken. A repeat smear was performed on All patients 12 weeks from their respective bookings. The following

group of patients had repeat cervical smears; 1) patients with histological reports of "suspicious", 2) patients with histological reports of "unsatisfactory", 3) after treatment of lower genital tract infections. The Papanicolaou technique of staining was used.

Cytopathologic reporting was in 4 groups; negative, suspicious, positive and unsatisfactory. The corresponding Papanicolaou grading was; grade 1 and 2 – both negative with grade 1 classified as normal and grade 2 as benign. Grade 3 was suspicious, grade 4 probably malignant and grade 5 malignant. When a smear was reported unsatisfactory, it may be due to failure to identify the specimen adequately insufficient cellular material for diagnosis (normal 100 – 200 cells), drying distortion or contamination from lubricant or glove powder. The reason was usually given in the report, which necessitates a repeat smear.

## Results

The age range was 15 – 39 years (mean 21.6 years). Primigravidae were 16 (32%) and grand multigravidae (parity 5 and above) were 16 (32%). The mean parity was 2.9.

The first cervical smear was negative in 34 (68%) patients, unsatisfactory 12 (24%), suspicious in 4 (8%) and none was positive. At repeat smear, 12

weeks after booking, one of the previously reported suspicious smears (grade 3) had progressed to positive and another negative. One reported unsatisfactory had become negative. There was no false positive or false negative report. Following treatment for infections, reports of repeat cervical smears of 11 reported initially as unsatisfactory showed 9 to be negative and 2 still unsatisfactory; the 2 had persistent vaginal infections of mixed variety.

Overall, 45 (90%) patient's smears were negative at the end of the study, 2 (4%) suspicious, 2 (4%) unsatisfactory and 1 (2%) positive.

## Discussion

Cervical smear in pregnancy is convenient, easy and sensitive. About 10 – 15 abnormal smears in 1000 pregnancies have been reported from antenatal clinics,<sup>3</sup> but false negative rates of 2.4 – 10% have been noted,<sup>6</sup> hence the need for repeat smear after 2 – 3 months. In the present report, 1 of 4 suspicious smears became positive, emphasising the need for repeat smears.

The association between infections of the lower genital tract and unsatisfactory cervical smear in this report is noteworthy. Of 11, 9 (82%) became negative after treatment of the infection and 2 that remained unsatisfactory had per-

sistent infection. Local infection, therefore, may influence cervical smear reporting. For suspicious smears, further evaluation to exclude invasive carcinoma is necessary, including colposcopy and colposcopically directed biopsy. Careful colposcopy and cytology alone, when performed by experienced colposcopist,<sup>7</sup> can exclude invasive carcinoma. The procedure may however be tedious and problematic in pregnancy due to cervical hypertrophy and increased vascularity. Colposcopic diagnosis of microinvasion requires a cone biopsy. The latter during pregnancy is associated with 50% morbidity, including delayed haemorrhage, subsequent cervical laceration, abortion and perinatal mortality.<sup>8</sup>

There have been observations that invasive carcinoma of the cervix is appearing in younger age groups.<sup>9</sup> This is important in our environment where teenage pregnancies and high parity are prevalent, and many patients with cervical carcinoma present late.<sup>10</sup> Surveillance by screening at a lower age than generally recommended is therefore necessary.<sup>11</sup> An other wise symptom free woman who has a positive cervical smear in pregnancy should be actively observed until repeat evaluation 6 weeks postpartum. Appropriate treatment is then given. It has been noted that 50% of cervical intraepithelial neoplasia observed

in pregnancy disappears spontaneously in the puerperium.<sup>12</sup>

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