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OPPORTUNISTIC CERVICAL CANCER SCREENING IN PREGNANCY

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ABSTRACT

Introduction: Cervical cancer is the most common malignancy diagnosed during pregnancy. In developing countries where organized screening programmes are lacking, antenatal clinics may provide an opportunity for screening. **Objectives**: The aim of this study was to analyse the prevalence and management of abnormal cervical cytology in pregnancy. **Methodology:** This was a prospective study conducted at the Meenakshi Medical College and RI, Kancheepuram, India, from July 2013 to June 2014. Convenience sampling technique was used. After adequate counselling, 300 antenatal mothers between 12 and 34 weeks of gestation were screened with conventional Pap smear. Colposcopy directed biopsy was taken where and when necessary. **Results:** Among the 300 pregnant women, 90 (30%) were primigravidae and 210 (70%) were multigravidae. 80% were between 21 and 30 years of age. 290 (96.6%) women have never had a pap smear in the past. Conventional Pap smear was taken at < 12 weeks of gestation in 56% of cases, between 13-20 weeks of gestation in 24% of cases, > 21 weeks of gestation in 20% of cases. ASCUS , LSIL and HSIL were reported in one case each. In those with LSIL and HSIL , Colposcopy directed biopsy was reported as CIN 1 and CIN 2 respectively. These two cases were kept under observation during the antenatal period. The CIN II lesion persisted on postpartum follow up and was treated with LLETZ. **Conclusion:** In countries like India Pap smear screening during pregnancy is worthwhile and the antenatal clinics provide ample opportunities for the screening.

Keywords: Screening, abnormal cervical cytology, management, pregnancy

INTRODUCTION

Cervical cancer is the most common malignancy diagnosed during pregnancy. The incidence of cervical cancer among pregnant women varies from 0.45 – 1 per 1000 live births The prevalence of abnormal Pap smear in pregnancy is dependent on the population undergoing screening and could be as high as 5-8% (2). The diagnosis and management of pre-invasive and invasive lesions of the cervix in pregnancy pose a number of problems such as technical difficulties, interpretation challenges and management dilemmas. Despite all these short comings, in a country like India where there is no organised screening programme available antenatal clinics provide ample opportunities for screening.

Objectives: The aim of this study was to analyse the prevalence and management of abnormal cervical cytology in pregnancy.

METHODOLOGY

Study design: This was a prospective observational study conducted at the Meenakshi Medical College and Research Institute, Kancheepuram, India, from July 2013 to June 2014.

Ethical approval: The study was approved by the Ethical Committee and Informed consent was obtained from all participants.

Sample size & method: 300 antenatal mothers were choosen by convenience sampling technique. convenience sampling technique was used.
Inclusion criteria: Women who have never had a pap smear in the past and those who did not have a pap smear in the last 3 years were included in the study.
Exclusion criteria: Women who had their pap smears within 3 years were excluded from the study.
Methodology: After adequate counselling and consenting, 300 antenatal mothers between 12 and 34 weeks of gestation were screened with conventional Pap smear. In those cases where cytology was reported abnormal, where and when **necessary colposcopy** directed biopsy was taken. Patients were followed up in the postpartum period and necessary treatment was given.

RESULT

Among the 300 pregnant women, 90 (30%)were primigravidae , 102 (34%) were second gravidae and 108 (36%) were gravida three and more. 80% were between 21 and 30 years of age and the median age was 25.7 years. The duration of marital life was less than 6 years in 240 (80%) cases. The median age of marital life was 5.1 years. More than normal vaginal discharge was reported by 14 patients and post coital bleeding by one patient. On examination marked cervical ectropion was noted in 147 (49%) cases.290 (96.6%) women have never had a pap smear in the past and only 10 (3.3%) women have had pap smears 3 years earlier (Table 1). Conventional PAP smear was taken at < 12 weeks of gestation in 168 (56%) of cases, between 13-20 weeks of gestation in 72 (24%) of cases, between 21-24 weeks of gestation in 36 (12%) of cases and > 25 weeks of gestation in 24 (8%) of cases. (Table2) The smear result was reported as follows: unsatisfactory smear in 15(5%) cases, no transformation zone cells, but normal cytology in 9(3%) cases, negative for intraepithelial lesion in 273(91%) cases, ASCUS , LSIL AND HSIL in one case each (Table 3).

Table 1: CLINICAL CHARACTERISTICS

AGE IN YEARS	NO.	%
21-25	156	52%
26-30	84	28%
31-35	36	12%
< 36	24	8%
Gravidity		
Primigravidae	90	30%
Second gravidae	102	34%
3 & more	108	36%
Duration of marital life		
< 3years	144	48%
4-6 years	96	32%
>7 years	60	20%
SYMPTOMS		
Vaginal discharge	14	4.6 %
PCB	1	
Examination findings		
Marked cervical ectropion	147	49%
Previous pap smear history		
No smears in the past	290	96.6%
Smears in the past	10	3.3%

Table 2: Gestational age at which Pap smear was taken

Gestational age	No.	%
< 12 weeks	168	56%
13-20 weeks	72	24%
21-24 weeks	36	12%
25-28 weeks	12	4%
29-32 weeks	12	4%

Table 3: Pap smear result in pregnancy

Report	No.	%
Not satisfactory	15	5%
Normal cytology, but no transformation zone cells	9	3%
Negative for intraepithelial lesion	273	91%
ASCUS	1	0.3%
LSIL	1	0.3%
HSIL	1	0.3%
Candida infection	12	4%

Candidiasis was reported in 12 cases. Spotting per vaginum was noted for 24 hours in 26 (8.7%) of cases. 42 (14%) women complained of discomfort at the time of Pap smear. Colposcopy was performed in two cases where the cytology was reported as LSIL and HSIL. In the case where cytology was LSIL, colposcopy directed biopsy was reported as CIN 1 lesion. CIN 2 lesion was confirmed by biopsy where the cytology was HSIL. These two cases were kept under observation during the antenatal period. Repeat cytology was taken three months postpartum in those cases with unsatisfactory smears and ASCUS. All were reported as negative for intraepithelial lesion. Repeat postpartum Cytology and colposcopy did not reveal any lesion on the cervix in the CIN 1 case. Whereas the CIN 2 lesion diagnosed in the antenatal period persisted in the postpartum period and was treated with LLETZ.

DISCUSSION

The prevalence of abnormal Pap smear in pregnancy is dependent on the population undergoing screening and could be as high as 5-8% (2). In our study 0.9% of the screened pregnant women showed abnormal Pap test result. In countries like UK where systematic screening programmes are available, screening during pregnancy is not undertaken unless follow up smear/colposcopy is required following treatment of high grade lesions and glandular lesions (3). However, there are several authors demanding the routine antepartum smear in order to improve diagnosis of the CIN as well as to maintain coverage of the target population.(4, 5) A Norwegian study showed that Pap smear screening during pregnancy increases the coverage of the cervical cancer screening programme (6). In our study, 96.6% of patients have never had a pap smear in the past. And 0.9% of them had an abnormal Pap test result. Norwegian guidelines state that 1st trimester ante partum Pap is recommended given no smear was taken during the period of 2,5 years prior to the visit (7). It has been reported that both organised and opportunistic Pap smear taking has lowered incidence rates of cervical cancer (8). The peak age of incidence of pre-cancerous lesions of the cervix peaks with the occurrence of pregnancies in the age range of 25–35 years (7, 9). From this perspective, screening women during pregnancy not only increases the coverage, but also will pick up more cases with pre – invasive lesions. In the UK, if required pap smear /colposcopy is advised between 3-6 months of gestation. (3) However, in our study, in majority of cases (56%) smear was taken at < 12 weeks of gestation and in 8% of cases after 24 weeks of gestation bigger specula were needed in these

cases. In our study, all the 3 cases who had abnormal pap test results were managed conservatively during pregnancy and definitive treatment was undertaken in the postpartum period. The safety of delaying treatment of pregnant women has been shown in a number of cohort and retrospective uncontrolled studies.(10,11,12,13)

CONCLUSION

Pregnancy is the period during which a woman definitely seeks medical care and antenatal clinics provide opportunities for screening. Clinicians should make every effort to educate, counsel and screen pregnant women if they have not had a Pap test in the past. Though there are difficulties and challenges for screening during pregnancy, opportunistic screening in pregnancy can pick up pre-invasive lesions which can potentially develop into invasive cancers. In a country like India where organised screening programmes are not available, as well as the awareness and uptake of available services by the target population is also poor, screening in pregnancy is worthwhile and may be a viable option to reduce the burden of cervical carcinoma.

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