

## The study of CIN in pregnancy

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### Abstract

**Introduction:** Each year approximately 1.3 lakh women are diagnosed with cervical cancer and 74000 die of it in India as per WHO observations. The importance of Pap smear in pregnancy is to screen more number of cases in reproductive age group. This prospective study is conducted with the aim to popularise the test and to screen many patients and to create awareness of carcinoma cervix in the society.

**Methods:** The study was conducted in the department of Obstetrics and Gynaecology at SSIMS and RC from September 2015 to September 2016. Pap smear was taken and the cytology was reported as per the modified Bethesda classification and report was given.

**Results:** The total numbers of cases studied were 100. 92 of the cases had satisfactory smear. 8% had infections, so report was given unsatisfactory in all those cases. In our study we found no abnormal PAP smear. 20% of the cases had candida and trichomonas infections.

**Keywords:** PAP smear, Pregnancy, ASCUS, LSIL, HSIL, CIN, Carcinoma cervix.

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### Introduction

Carcinoma cervix is one of the common genital cancers seen in the developing countries and accounts for 18% cases in India.<sup>(1)</sup> The majority of these cases are seen in the developing countries due to low socio economic status, poor hygiene, excessive population growth, early age of marriage and coitus.<sup>(2)</sup> Each year approximately 1.3 lakh women are diagnosed with cervical cancer and 74,000 die of it in India as per WHO guidelines.<sup>(2)</sup>

There has been decrease in the incidence of cervical cancer and associated mortality due to screening programmes.

According to the recommendations of American Congress of Obstetrics and Gynaecologists (ACOG) and American Cancer Society (ACS), cervical screening should be conducted 3 years after first sexual intercourse, or at the age of 21 years.<sup>(3)</sup>

Accuracy of PAP smear in pregnancy is equal to non-pregnant status.<sup>(4)</sup> Pap smear detects on an average 60 to 70% of the cases of cancer cervix and 70% of the endometrial cancer.<sup>(5)</sup> The importance of pap smear in pregnancy is to screen as many cases as possible in the reproductive age group. PAP smear findings were recorded by cytopathologists using Bethesda classification (updated in 2001), which is used till present date.<sup>(6)</sup> This prospective study is conducted with the aim to popularise the test and to screen many patients and to create awareness of carcinoma cervix in the society.

### Materials and Method

The study was conducted in the department of Obstetrics and Gynaecology at SSIMS and RC from

September 2015 to September 2016. Total 100 antenatal cases presenting to the outpatient department were considered for the study. The short history including obstetric history, socio economic status, family history, high risk behaviour was taken followed by clinical examination including per abdomen, Foetal heart monitoring examination. Per speculum examination was done to see any lesions, warts, polyps, bleeding, unhealthy cervix and any discharge. After exposing the cervix, the smear was taken by rotating the Ayre's spatula 360 degrees on ectocervix and smeared on glass slide and fixed with isopropyl alcohol and send for cytology. The cytology was studied by Pathologists and reported as per the modified Bethesda classification and report was given.

### Inclusion Criteria

1. All pregnant women irrespective of gestational age.

### Exclusion Criteria

1. Vaginal infections
2. Intercourse in past 48 hours
3. Vaginal douching / medications in last 48 hours.
4. Threatened abortion.

**Data Analysis:** The data was collected and analyzed using SPSS- 15 software. The statistical analysis was done and inference was withdrawn.

### Results

After data collection, all the results were observed in following tabulations. 92.4% of the cases belonged to the upper middle socio economic status. There were 12 cases in the age group less than 20 yrs. The median age group was 23.1 yrs. The maximum pregnant women were seen in the age group of 20 to 25 yrs that was 51%. 57% of the women had conceived within 1 year

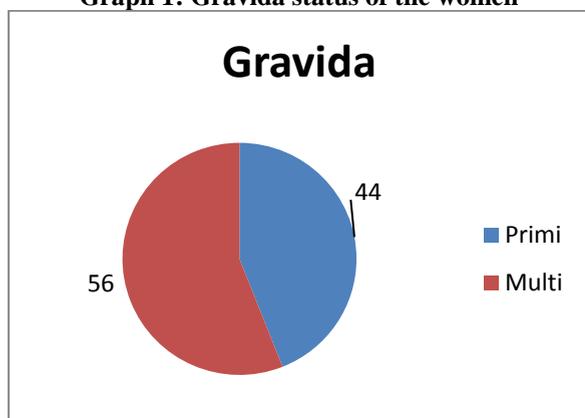
of marriage and 10% had conceived within 1 year of previous child birth (Table 1).

In the study 56 cases presented were multigravida and 44 were primigravida (Graph 1). Of all the 100 cases, 49 cases presented in first trimester, 44 cases in second and 17 cases in the third trimester(Graph 2).

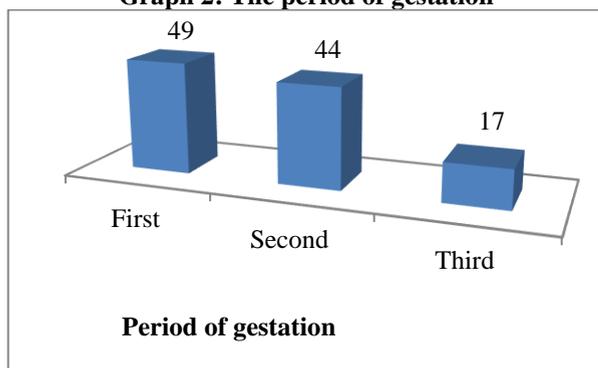
**Table 1: Maternal characteristics**

| Age of Women   |           |
|----------------|-----------|
| Age            | Frequency |
| 15 to 20       | 12        |
| 20 to 25       | 51        |
| 25 to 30       | 28        |
| More than 30   | 09        |
| *Married Years |           |
| Less than 1    | 57        |
| 1 to 5         | 27        |
| 5 to 10        | 14        |
| More than 10   | 02        |

**Graph 1: Gravida status of the women**



**Graph 2: The period of gestation**



In the study, 15% of the women had complaints of excessive white discharge per vagina of which 3 cases had erosion over the cervix and white discharge on per speculum examination and had inflammatory smear. 92% of the smears were found to be satisfactory and normal. No smears showed changes of Atypical Squamous Cells of Undetermined Significance (ASCUS)/ Low –grade Squamous Intraepithelial Lesion

(LSIL)/ High –grade Squamous Intraepithelial Lesion (HSIL). The symptomatic women and with PAP smear cytology showing inflammation were treated appropriately (Table 2).

**Table 2: Table showing complaints, examination findings and cytology**

|                          | Yes |
|--------------------------|-----|
| Complaints               |     |
| White discharge          | 15  |
| Per Speculum Examination |     |
| Healthy                  | 97  |
| Erosion                  | 03  |
| Growth                   | 00  |
| Cytology                 |     |
| Normal                   | 92  |
| Inflammatory             | 08  |
| LSIL/HSIL                | 00  |

Only 6% of the women had idea about carcinoma cervix and screening test for the same. None of the women underwent PAP smear before and only 1 was immunized with vaccine for carcinoma cervix. Of all the women 2% had recurrent infections, both of them were multigravida. They and their partners were treated before pregnancy. One woman had HIV reactive status and was on the treatment for the same (Table 3)

**Table 3: Risk factors for PAP smear**

| Risk Factors          | Number |
|-----------------------|--------|
| Idea of PAP smear     | 06     |
| Early age of marriage | 12     |
| HIV                   | 01     |
| Recurrent infections  | 02     |

**Discussion**

In our study smear was satisfactory in 92% of the cases which was comparable to the study by Mishra et al showing 96.6% satisfactory smears.<sup>(4)</sup>

The prevalence of abnormal PAP smear in pregnancy is dependent on the population undergoing screening and it can be 5- 8%.<sup>(7)</sup> In our study we found no abnormal PAP smear. Similarly low incidence has been reported in another study by Khanuja et al.<sup>(8)</sup>

Of all the cases, 8% had infections, so report was given unsatisfactory in all those cases. They were treated for infections. 20% of the cases had candida and trichomonas infections of which 12 were asymptomatic. Prevalence of asymptomatic candida infection is noted to be 20-30% by various authors.<sup>(9,10)</sup>

In the study by Farr and Kiss, the incidence of preterm labour is significantly lowered by routine antenatal screening for Candida and Trichomonas infection and treating them.<sup>(11)</sup>

**Conclusion**

It is essential to screen women at any visit to Gynecologist. Cytology based screening is considered

as the gold standard method for screening of carcinoma cervix. In our country, utility of the available screening programmes is not upto the mark because of lack of awareness among the people. It is important to screen them whenever possible to reduce the burden of carcinom cervix.

It is the important to pick up the pre invasive lesions to avoid further development into invasive cancer. Also the routine screening of candida infection is recommended at least in the high risk group which may be missed on the routine examination.

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