



## VITAL ROLE OF CERVICAL CYTOLOGY FOR EARLY DETECTION AND PROGNOSIS OF CARCINOMA CERVIX IN WOMEN.

### Pathology

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### ABSTRACT

The cancer of cervix is the major health problem among females in India. Early detection through screening is preventable from cervical cancer by using papanicolaou smear. Several tests can be used in screening for cervical cancer but the pap smear (cytology) is used among large population in India.<sup>1</sup>

The present study is also based on several factors which influence cervical cancer i.e., age of first coitus, marriage, religion, recurrent vaginal infections, parity, cervical erosion, polygamy and socio-economical condition.

The present study was done at the Department of Pathology, Rajendra Institute of medical sciences, Ranchi between September, 2019 to February 2020.

The recent work has been done by oncyto-pathological smear study of cervical cells of 140 cases in female of 20 - 65 years age group. Complete history of patient including obstetrical, menstrual history and family history. Histopathological study of only positive slide done.

Aim is to detect dysplasia, carcinoma in situ and invasive carcinoma in early stage.

### KEYWORDS

#### I. Introduction

In India cervical carcinoma is one of the most common cancers among women and has also been the common cause of death in India. It accounts about 20% - 25% of total neoplasm of female genital tract malignancy in Indian women.<sup>2</sup>

The transformation zone of uterine cervix faces continuous changes, which ultimately leads to dysplasia. Sometimes it progresses to intraepithelial neoplasia and invasive type of cancer. Most cervical cancer starts with gradual progression of dysplastic changes over a period of several years to pre-invasive form called carcinoma in-situ.

The pre-invasive form involves squamous epithelium taking 7 - 10 years. Though cause of carcinoma cervix is unknown but several factors influence, which are age, age of first coitus, marriage, religion, recurrent vaginal infections, parity, cervical erosion, polygamy and socio-economical condition<sup>3</sup>. Now-a-days, by cervical cytology study we can determine early diagnosis, and detection of premalignant condition of cervical cancer.

Today, histological diagnosis, cytological diagnosis, and histo-cytological correlation makes perfect early diagnosis of carcinoma cervix. Cervical epithelial cell clusters, endocervical cell and metaplastic cell are found. If slide contains adequate number of cervical cells which help to give opinion about diagnosis.

#### II. Material and Methods

A total of 140 cases (females) who attended OPD between the age of 20-65 years at Rajendra Institute of Medical Sciences, Ranchi.

**Study Design:**  
Retrospective study

#### Study Location:

Department of Pathology at Rajendra Institute of Medical Sciences, Ranchi.

#### Study Duration:

September 2019 to February 2020.

#### Sample size:

140 females.

**Sampling technique** is systemic random sampling.

#### III. Result

In our study 140 cases were examined during the period of six months. The age of women ranging from 20 to 65 years with an average of 40. Most of the females were in the age of 30 to 39 years. Second highest frequency was in the age group between 40 to 49 years and least number of cases were seen among women >60 years.

**Table 1: Showing distribution of Study subjects according to Age group**

| Age group (years) | Number of cases | Percentage |
|-------------------|-----------------|------------|
| 20-29             | 22              | 15.71%     |
| 30-39             | 63              | 45.00%     |
| 40-49             | 41              | 29.28%     |
| 50-65             | 14              | 10.00%     |
| Total             | 140             | 100.0%     |

As per as the patients presenting complaint was concerned, vaginal discharge was commonest (52.14%) followed by irregular menstrual bleeding (22.14%) followed by pelvic pain and dyspareunia.

**Table 2: Showing distribution of Study subjects according to chief complaints**

| Clinical Features            | Number of Cases |
|------------------------------|-----------------|
| Whitish discharge per vagina | 73              |
| Irregular menstrual bleeding | 31              |
| Pelvic pain                  | 7               |
| Dyspareunia                  | 5               |
| Prolapsed                    | 24              |

With help of binocular microscope different findings of slides seen.

1. Reactive cellular changes associated with inflammation (includes typical repair), radiation, intra uterine contraceptive device (IUCDs)
2. Ascus (Atypical squamous cells of undetermined significance) In borderline changes/ascus cells show nuclear enlargement with irregularities of nuclear margin, and vesicular chromatin cells may be seen in groups or sheet which are found in immature squamous metaplastic cells.
3. LSIL (Low grade squamous intraepithelial lesion) The smear that shows mild dyskeratotic cells are mature superficial or intermediate type with enlarged nucleus up to half of the cells may be multinucleated with irregular nuclear outline and chromatin

- clumping. They are often associated with HPV infection.
4. Hsil (High grade squamous intraepithelial lesion) Smear shows cells with enlarged nuclei up to two-third size of cells and irregular nuclear margin. These nuclei are hyperchromatic. Cells that are seen in smear shows mild to moderate dyskariosis.

**Table 3: findings of pap smear cytology**

| Sl.no. | Diagnosis                                                 | Number of cases | Percentage |
|--------|-----------------------------------------------------------|-----------------|------------|
| 1      | Unsatisfactory for evaluation                             | 11              | 7.85%      |
| 2      | Negative for intra epithelial lesion or malignancy (NILM) | 121             | 86.42%     |
| 3      | ASCUS                                                     | 4               | 2.85%      |
| 4      | LSIL                                                      | 3               | 2.14%      |
| 5      | HSIL                                                      | 1               | 0.71%      |
|        | TOTAL                                                     | 140             | 100%       |

In our study 93% smears were satisfactory . Highest frequency of cervical abnormality was seen in 40 to 49years age group,

In our study 129 (92.14%) smears were satisfactory according to Bethesda system. Maximum number of cases 121( 86.42) fell into the category of NILM. Highest frequency of cervical abnormalities was seen in between 30 - 39 years age group.

#### IV.Discussion

Cancer of cervix is easily detectable due to easy approach to cervix for cytological examination and biopsy(histopathological examination).cervical cytology has been mainstay for screening that has led to substantial reduction in cancer incidence<sup>1</sup>.

In our study the mean age of patients with abnormal smears was 40 years. Maximum number of patents belongs to low socioeconomic groups, whereas rest belongs to middle and high economic groups.

The difference in the incidence of epithelial cell abnormalities were mostly due to difference in geographic area of study and difference in the socioeconomic standards, racial, religious and other ethnic factors peculiar to the population studied. Low incidence of different epithelial cell abnormalities in present hospital based study correlate well with other hospital based studies done in India by Kuastubh Mulay<sup>5</sup> and Anita N. Kavatkar<sup>6</sup>. Incidence of epithelial cell abnormalities were also lower in studies done in developed world by Vassilakos<sup>7</sup> and T. P. Thamboo<sup>8</sup>.

#### V. Conclusion

Cervical cancer is one of the most common malignancies among women in India. Cytological diagnosis is an important tool for mass screening programs and early diagnosis of cervical intraepithelial neoplasia including dysplasia and carcinoma in-situ.

#### VI.References

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