

A Case Study of 600 Cervical Pap Smears In a Tertiary Hospital of Northeast India in a Hilly State of Tripura

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ABSTRACT

Background: Cervical cancer is the third most common cancer in the world and is the second leading cause of cancer in India. It is 100% treatable and preventable. Cytology began to be used for cervical cancer screening since 1960 and the incidence has decreased dramatically in many developed nations. Pap smear is an effective and widely used screening tool to detect precancerous and cancerous lesions in the cervix caused by HPV at an early stage. The purpose of this study is to evaluate the various cytomorphological features of cervical pap smears collected in a tertiary set up in a hilly state of Tripura. **Methods:** The present study is a retrospective study of 600 cervical pap smears studied from January 2018 to January 2020 and received in the post graduate department of Pathology, Tripura Medical College. Samples are collected from women aged between 25 to 65 years presenting with some gynaecological issues or as a part of routine check. After staining with pap stain, the smears are evaluated using 2014 Bethesda system and are analyzed with other similar studies. **Results:** Maximum number of cases are in age group of 36-45 years and mean age of study population is 42.5 years. In our study, HSIL (High Grade Squamous Intraepithelial Lesion) reports are 31 cases (5.2%) and Squamous cell carcinoma are 14 (2.3%) in our study. **Conclusion:** In our study abnormal pap smears are reported in 91.2% cases which itself proves the usefulness of this screening procedure for cervical cancer.

Keywords: Pap smears, HSIL, squamous cell carcinoma

INTRODUCTION

Cervical cancer is the third most common cancer in the world and is the second leading cause of cancer in India.^[1] It is a well known fact that cervical cancer is 100% treatable as well as preventable and that makes it a valuable area of action. Cytology began to be used for cervical cancer screening since 1960 and the incidence has decreased dramatically in many developed nations. Pap smear is an effective and widely used screening tool to detect precancerous and cancerous lesions in the cervix caused by HPV at an early stage and despite its limitations, this method has reduced the mortality of cervical cancer significantly.^[2] Pap smear test is performed by opening the vaginal canal with Cusco speculum and collecting sample from transformation zone, from posterior vaginal wall and endocervical canal.^[3]

MATERIALS AND METHODS

This was a retrospective observational study. This study was carried out at Pathology Department of

Tripura Medical College, Hapania, Tripura from January 2018 to January 2020. 600 samples were taken from women aged between 25 to 65 years presenting with some gynaecological issues or as a part of routine check up by using Ayres spatula. Patients came to the outdoor of Gynaecology Department of Tripura Medical College and smears were collected and sent to the Pathology Department. All the slides were labelled and immediately dipped in 95% Ethyl alcohol jars. After staining with pap stain, reporting was done following the 2014 Bethesda System for reporting Cervical Cytology.^[4]

Inclusion criteria

- Women between 25 to 65 years of age with active sexual history.

Exclusion criteria

- Women below 25 years of age
- Women without sexual history
- Women beyond 65 years of age

RESULTS

Table 1: Age Distribution

Age in years	No. of patients	Percentage
25-35	149	24.8%
36-45	178	29.7%
46-55	165	27.5%
55-65	108	18%
Total	600	100%

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In our study, 600 cervical pap smears were taken from Gynaecology OPD between 25 to 65 years of age. Maximum were in age group of 36-45 years and mean age of study population was 42.5 years. 105 cases were nulliparous and rest, 495 were

multiparous. Out of 600 cases, 352 women complained of some gynaecological problem and rest, 248 women came as a part of routine gynaecological examination.

Table 2: Pap smear analysis

Pap smear analysis	No. of patients	Percentage
Inflammatory	304	50.7%
Bacterial vaginosis	75	12.5%
Candida	21	3.5%
Trichomonas vaginalis	39	6.5%
ASCUS (Atypical Squamous Cells of Undetermined Significance)	23	3.8%
LSIL (Low Grade Squamous Intraepithelial Lesion)	40	6.7%
HSIL (High Grade Squamous Intraepithelial Lesion)	31	5.2%
Squamous cell carcinoma	14	2.3%
NILM (Negative for Intraepithelial Lesion or Malignancy)	53	8.8%
Total	600	100%

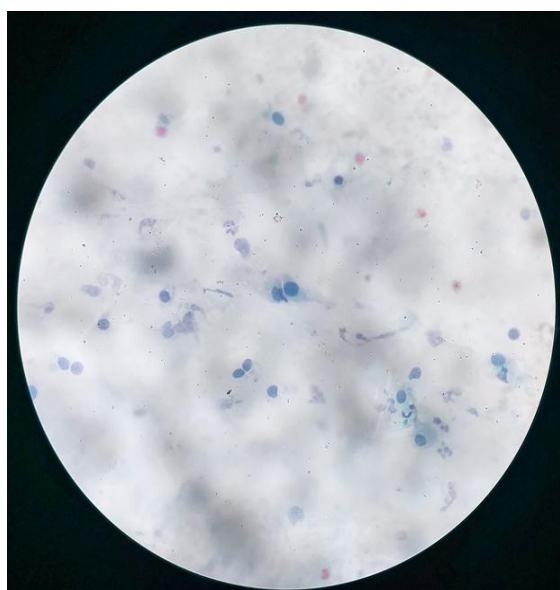


Figure 1: Low power magnification (10X) showing ASCUS cell

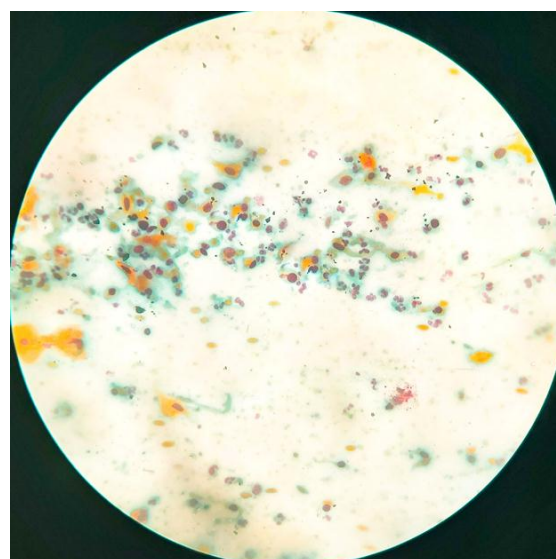


Figure 3: Low power magnification (10X) showing malignant keratinized squamous cells.

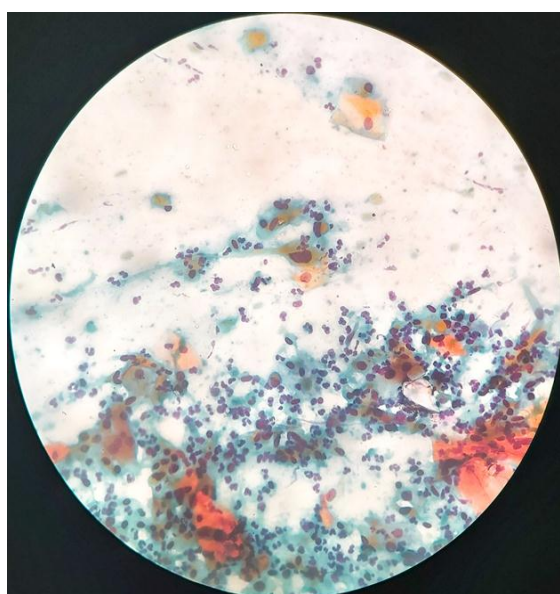


Figure 2: Low power magnification (10X) showing HSIL.

DISCUSSION

Early detection of precancerous lesion can be done by cytological examination of cervical pap smear. If not detected and treated early, such lesions can likely transform into invasive cancers. It is a proven fact that screening programs in developed nations can help in reducing the burden of mortality and morbidity rate due to cervical cancer.

In our study we have taken 600 pap smears from women presenting to Gynaecology OPD of Tripura Medical College, Hapania between 25 to 65 years. In study conducted by Sunita et al,^[5] 560 pap smear reports were analysed.

In our study maximum number of women were between 36 to 45 years of age (29.6%). In study conducted by Lakshmi et al,^[6] maximum number of women between 45 to 55 years age group (34%). In study conducted by Sunita et al,^[5] between 31 to 40 years age group (32.68%) were studied.

Abnormal pap smear reports in this study was noted in 547 cases (91.2%) whereas Lakshmi et al,^[6]

reported in 187 cases (93.5%) and in Sunita et al,^[5] 433 cases (77.32%) were abnormal.

In our study, inflammatory smears were seen in 304 cases (50.7%) whereas in Lakshmi et al,^[6] 134 reports (67%) were inflammatory and in Shaki et al,^[7] inflammatory smears were reported in 203 cases (18.4%).

ASCUS (Atypical Squamous Cells of Undetermined Significance) were reported in 23 cases (3.8%) in our study. In Lakshmi et al,^[6] ASCUS were seen in 5 cases (2.5%) and in Shaki et al,^[7] 45 cases (4%) were seen.

Smears showing LSIL (Low Grade Squamous Intraepithelial Lesion) were 40 cases (6.7%) in our study. In study conducted in Lakshmi et al,^[6] 15 reports (7.5%) gave LSIL and in study conducted by Shaki et al,^[7] 75 cases (6.8%) presented with LSIL.

In our study, HSIL (High Grade Squamous Intraepithelial Lesion) reports were 31 cases (5.2%), whereas in a study conducted by Lakshmi et al,^[6] 12 reports have HSIL and in Sunita et al,^[5] 2 reports (0.3%) gave HSIL.

Smears showing Squamous cell carcinoma were 14 (2.3%) in our study whereas in Lakshmi et al,^[6] 2 (1%) were reported and in Sunita et al,^[5] 3 cases (0.5%) were detected.

CONCLUSION

Many studies have been conducted in India and in one such study despite 58.6% of women knew about the availability of Pap screening tests, only 3% had opted for a pap smear(8). But, pap smear tests are most affordable tests in detection of cervical cancer. In our study abnormal pap smears were reported in 91.2% cases which itself proves the usefulness of this screening procedure for cervical cancer.

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