



CERVICAL PAP SMEAR STUDY AND ITS UTILITY IN CANCER SCREENING IN PATIENTS ATTENDING OUT-PATIENT DEPARTMENT IN A TERTIARY CARE HOSPITAL.

Pathology

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ABSTRACT

Introduction: Cervical cancer is one of the major causes of mortality among women worldwide. Pap smear study is a simple, easy, cost effective test for detection of precursor lesions. **Aims and Objectives:** Aim of the present study was to evaluate women for precancerous lesions using the Pap smear test. **Material and methods:** All women who visited the outpatient gynecology clinic of the Department of Obstetrics and Gynaecology at Tertiary care hospital in Gujarat India, over a period of 2 months for different clinical problems were recruited for the study. Smears were obtained using an Ayre spatula and spread over a marked glass slide, which was placed in 95% ethyl alcohol and sent to the department of cytopathology for examination. Papinocolaustain was done in the slide after fixation in 10% methanol. **Results:** Total 200 pap smears were studied in the department of cytopathology. Maximum age group was in the range of 31-40 years. 124 (62%) cases were negative for intraepithelial lesion or malignancy. 49(24.5%) samples were suspicious for malignancy. Transformation zone was present in 123 samples (62%). **Conclusion:** Pap smear testing is a very useful, simple, economical, and safe tool for detecting precancerous cervical epithelial lesions. It should be established as a routine screening procedure to reduce the treatment burden, morbidity, and mortality

KEYWORDS

Cervical cancer, precancerous lesions.

INTRODUCTION

Cervical cancer is the second most common cancer in females and is a major cause of morbidity and mortality according to WHO (world health organisation).¹ Pap smear is a simple, safe, non-invasive and cost effective method for the detection of pre-cancerous, cancerous and benign lesions of cervix.² The Pap smear is a simple, safe and effective test to detect cervical cancer at an early stage.³ Pap smear also has a greater role in diagnosis of inflammatory lesions including the identification of causative organisms and atrophic changes.

Papanicolaou test results are routinely reported according to The Bethesda System (TBS). This was introduced in 1988 and revised in 1991, 2001 and the most recent update was done in 2014. TBS provided the framework necessary for the development of systematic, evidence-based cervical cancer screening and management guidelines.^{4,5}

Aims and Objectives

Aim of the present study was to evaluate women for precancerous lesions using the Pap smear test.

MATERIAL AND METHODS

This prospective study was carried out at B.J Medical College, Ahmedabad during the period of March 2024 to April 2024 for a period of 2 months. All sexually active women who attended gynecology OPD including those who had complaints of bleeding per vaginam, foul smelling whitish vaginal discharge or something coming out of vagina included in study. A detailed history and symptoms along with parity and last menstrual period were recorded by the concerned gynaecologists and Pap smears made were sent to pathology laboratory for examination. Smears were taken by residents of gynecology department by modified ayres wooden spatula. Sampling of both ectocervix and endocervix was done. Smear was prepared, properly labelled, fixed in 95% ethyl alcohol immediately and sent to pathology department for pap staining. After staining slides were mounted with DPX, screened and reported by pathologist according to 2014, Bethesda system.

RESULTS

Table-I Age wise distribution

Age group (years)	No of patients	Percentage
21-30	30	15 %
31-40	76	38 %
41-50	66	33 %
51-60	12	6 %

61-70	14	7 %
71-80	2	1 %
Total	200	100%

Maximum number of patients visiting outpatient department were in the age group of 31-40 years (38%) and least number were in the age group of 71-80 years (1%)

Distribution on the basis of menstrual history

regular Irregular Excessive bleeding Menopause

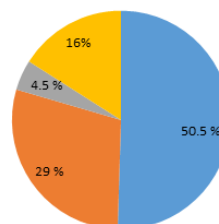


Chart I Distribution on the basis of menstrual history

The number of patients who had regular menstrual cycle were (50.5%) whereas Patients with excessive bleeding were only (4.5%).

Table II Distribution of cases based on clinical presentation

Symptoms	No of patients	Percentage(%)
Asymptomatic	81	40.5%
Menorrhagia	26	13%
Whitish discharge	62	31 %
Post menopausal bleeding	5	2.5 %
Post coital bleeding	5	2.5%
Intermenstrual bleeding	2	1 %
Lower abdominal bleeding	8	4%
Spotting	4	2 %
UV prolapse	7	3.5%
Total	200	100 %

Maximum number of patients were asymptomatic (40.5 %). 62 patients (31 %) had complaints of whitish discharge.

On the basis of per speculum examination cervix erosion was noted in maximum no of cases (52%). Cervical ulcer was noted in only 1 % cases.

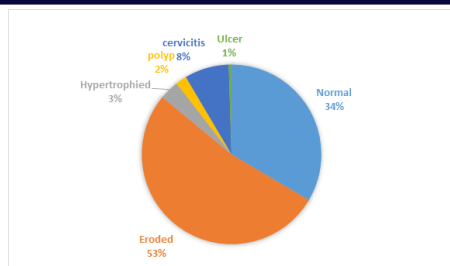


Chart II Distribution on the basis of per speculum examination

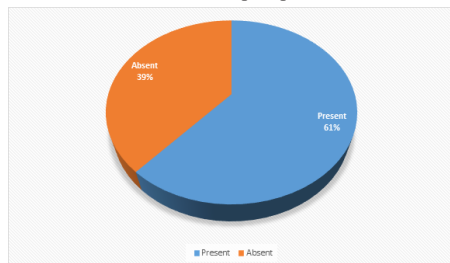


Chart III Distribution on the basis of presence of Transformation zone

Transformation zone or endocervical zone was present in (61%) cases and (39%) cases it was absent.

Table III Distribution of cases based on cytomorphology

Interpretation	No of cases	Percentage
Unsatisfactory	22	11%
Atrophic smear	5	2.5%
Negative for intraepithelial lesion or malignancy (NILM)	124	62%
Atypical squamous cells of undetermined significance (ASC-US)	25	12.5%
Low grade intraepithelial lesion (LSIL)	9	4.5%
Atypical squamous cells –cannot exclude HSIL (ASC-H)	4	2%
High grade intraepithelial lesion (HSIL)	6	3%
Atypical glandular cells of undetermined significance (AGUS).	4	2%
Atypical-favor neoplastic	1	0.5%
TOTAL	200	100%

Maximum number of cases were Negative for intraepithelial malignancy (62%), followed by atypical squamous cells of undetermined significance (12.5%).

Table IV Distribution of cases interpreted as negative for intraepithelial lesion (NILM).

Interpretation	No of cases	Percentage
Non specific inflammation	83	66.9%
Shift in flora suggestive of bacterial vaginosis	26	20.9%
Trichomonas vaginalis	14	11%
Candida	1	0.8%
Herpes simplex virus	2	1.6%
Total	124	100%

DISCUSSION

This prospective study was conducted for 2 months and the pap smears were reported according to the Bethesda system 2014. This study included 200 cases. The study included patient from the age of 21 to 80 years with youngest women was of age 21 and the oldest women of the age 80 years. The Pap smear screening should start in the age group of 20-30 years, depending on burden of the disease and the younger age group should be screened for premalignant conditions. The maximum no patients were in the age group of 31-40 years which is similar to the studied of Pudasaini et al, Hirachand et al, Ranabhat et al, Bukharet al and Bamanikar et al.⁶⁻⁹

Every female who consented for the pap smear examination, proper history was taken. The number of patients who had regular menstrual

cycle were (50.5%) whereas patients with excessive bleeding were only (4.5%).

In the present study maximum number of patients were asymptomatic (40.5 %). 62 patients (31 %) had complaints of whitish discharge. Similar findings were noted by Nikumbhet al.¹⁰

On the basis of per speculum examination cervix erosion was noted in maximum no of cases (52%), cervical hypertrophy (4%), cervical polyp (2%) and cervical ulcer was noted in only 1 % cases.

Transformation zone or endocervical zone was present in 123 (61%) cases and 77 (39%) cases it was absent.

In the present study 22 (11%) cases were unsatisfactory for evaluation due to low cellularity and dense inflammation. Similar findings were noted in Umarani et al¹ Bamanikar et al⁹

In the present study 124 (62%) of NILM cases were observed. Smears with non-specific inflammation were reported to be 83 cases (66.9%), the improper technique and improper day for collection of specimen can be considered. Bacterial vaginosis cases were 26 (20.9%) followed by trichomonas vaginalis 14 (11%) whereas only 1 case of Candida and herpes simplex virus were noted. Similar findings were noted by Vaghela et al¹¹ and Saha et al¹². Negative for Intraepithelial Lesion were 47% and 50.6% respectively.

Epithelial cell abnormalities represents 49 (24.5%) cases in our study which includes low grade squamous intraepithelial lesion (LSIL), high grade squamous intraepithelial lesion (HSIL), atypical squamous cells of undetermined significance (ASCUS) and Atypical glandular cells (AGC). Other studies had shown that the prevalence of epithelial cell abnormalities were different in different studies done Saha et al, Renuka, et al, Nair et al, Tailor et al, Selhi et al, Rizvi et al and Verma et al respectively (1.7%, 10.3%, 1.8%, 5.6%, 1.8%, 2.0%, 1.2% and 13.6%)¹²⁻¹⁸

LSIL cases were 9 (4.5%), HSIL cases were 6 (3%) which are different in different studies. ASC-US cases 25 (12.5%), ASC-H 4 cases (2%) AGUS 4 cases (2%) were noted in present study.

CONCLUSION

Pap smear testing is a very useful, simple, economical, and safe tool for detecting precancerous cervical epithelial lesions. It should be established as a routine screening procedure to reduce the treatment burden, morbidity, and mortality. Pap smear examination should begin as soon as the female are sexually active irrespective of their age and should be practiced as a routine gynaecological screening program. Even the government and NGOs can help in increasing the awareness and educating the people about the screening benefits of Pap smear at an early stage. Vaccination against Human papilloma virus (HPV) has started in the developing countries as well. The Bethesda System 2014 reporting of cervical Pap smear provides uniformity in reporting and conveys relevant information to the clinician.

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