

To study the pattern of various cervical lesion in women attending tertiary care center Jhalawar Medical College, Jhalawar

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Abstract

Background: Cancer of the cervix is an increasing health problem and an important cause of mortality in women worldwide. The incidence of cervical cancer arises worldwide.

Methods: A prospective randomized study was conducted in the Department of Pathology, Jhalawar Medical College & Hospital from June 2019 to May 2020. Cervical cytology samples from all the females of age 21 years with presenting complaints of white discharge per vagina, bleeding per vagina, post-coital bleeding, irregular menstruation and for routine cervical cancer screening were evaluated.

Results: In present study, a total of 508 smears were analyzed. Out of which 94.49% smears were satisfactory for evaluation. 29.72% shows normal smear and 52.56% shows benign cellular changes. 5.12% smears shows Bacterial vaginosis. 45.67% were inflammatory smears and 1.77% were atrophic smears. 2.16% shows ASCUS, 0.39% shows ASCH and 0.19%

shows AGUS. 7.87% shows LSIL, 1.18% shows HSIL and 0.39% shows malignant squamous cell carcinoma.

Conclusion: We concluded that premalignant and malignant lesions of cervix are not uncommon in our set up. Cervical cytology by Pap smear is a simple, safe and effective test to detect premalignant and malignant lesions of cervix at an early stage, and thus help the clinicians in early and more efficient management of the patients.

Keywords: HSIL, LSIL, ASCH, AGUS

Introduction

Cancer of the cervix is an increasing health problem and an important cause of mortality in women worldwide. The incidence of cervical cancer arises worldwide. The difference in incidence between developing and developed countries, where cervical cancer cases have been significantly reduced, is large. In developing countries like India, the burden of cervical cancer is still high. According to the World Cancer statistics, >80% of all the cervical cancer cases

are found in developing and low-resource countries, because of a lack of awareness and difficulty in running cytology-based screening programs.^[1] More than one-fifth of all cervical cancer deaths occur in India.^[2] Every year, 122,844 women in India are diagnosed with cervical cancer, and 67,477 women die from the disease.^[3] Cervical carcinoma is the fourth most common malignancy worldwide and fourth most common cause of deaths due to cancer worldwide which makes it an important public health problem.^[4] Cervical cancer is the second most common cancer among women in world^[5] and the most common in India.^[6] The data from population-based cancer registries (PBCR) functioning in India, a network of various such registries is functioning under the National Cancer Registry Programme (NCRP) of Indian council of Medical Research (ICMR), in their consolidated report of year 2001-2004 reveal that the age adjusted incidence rates (AARs) was highest in Aizwal district (30.6/1,00,000) and minimum in Ahmedabad (5.5/1,00,000). CR and AAR in Barshi was 18.2 and 19.1 while in Ahmedabad it was 4.9 and 5.5 respectively.^[7]

Cervical cancer is a preventable disease due to the long pre-invasive stage. Early detection and appropriate treatment are possible if robust screening is implemented.^[8] Early cervical epithelial changes can be identified by a PAP smear test, which is the primary screening test for detection of precancerous cervical intraepithelial neoplasia and the early stage of invasive cervical cancer.

Materials And Methods

A prospective study was carried out in the department of pathology, jhalawar medical college & hospital by conventional pap smear over a period of 1 year during June 2019- may 2020.

- The study was conducted on 508 patients coming to outpatient department of Obstetrics and Gynaecology , SHKBM Hospital , Jhalawar, Rajasthan.

Selection Criterion

Inclusion criteria

Cervical cytology samples from all the females of age 21 years and above attending the obstetrics and gynaecology out patient Department with presenting complaints of white discharge per vagina, bleeding per vagina, post-coital bleeding, irregular menstruation and for routine cervical cancer screening.

Exclusion criteria-

1. Non co-operative patients.
2. Patients who do not give consent.
3. Patients with massive bleeding per vagina.
4. Treated cervical carcinoma patients.
5. Pregnant women.

The cases were examined in detail and findings recorded on the standard proforma. First a careful history of the patient taken, complaints noted in the order of importance and duration. A detailed obstetric, menstrual, contraceptive history noted.

Methodology

- After obtaining approval and clearance from the institutional review board, only those patients meeting the inclusion and exclusion criteria enrolled for the study.
- Informed consent obtained from each participant.
- After obtaining proper consent, proforma was given to each patient and detailed history was obtained. After that, physical examination was done and the patient was put in lithotomy position for specimen collection.

Results

Table no. 1: Analysis of pap smear

Pap Smear	Total No.	%
Total Smears	508	100
I. Adequacy of smears		
1. Satisfactory for evaluation	480	94.49
2. Unsatisfactory for evaluation	28	5.51
II. General categorization	151	29.72
A. Normal smears		
B. Benign cellular changes	267	52.56
i. <u>Specific Infections</u>		
Bacterial vaginosis	26	5.12
ii. <u>Reactive Changes</u>		
Inflammatory smears	232	45.67
Atrophic smears	9	1.77
C. Epithelial cells abnormality		
i. Atypical epithelial cells		
-Atypical squamous cells of undetermined significance (ASCUS).	11	2.16
-Atypical squamous cells cannot exclude HSIL (ASC-H)	2	0.39
-Atypical glandular cells of Undetermined Significance (AGUS).	1	0.19
ii. Low grade squamous intraepithelial lesion (LSIL)	40	7.87
iii. High grade squamous intraepithelial lesion (HSIL)	6	1.18
iv. Malignancy- Squamous cell carcinoma	2	0.39

A total of 508 smears were analyzed. Out of which 94.49% smears were satisfactory for evaluation. Out of 94.49% satisfactory smears, 29.72% shows normal smear and 52.56% shows benign cellular changes and 12% shows epithelial cells abnormality.

5.12% smears shows Bacterial vaginosis. 45.67% were inflammatory smears and 1.77% were atrophic smears. 11 cases (2.16%) shows ASCUS, 2 cases (0.39%) shows ASCH and 1 case (0.19%) shows AGUS. 40 cases(7.87%) shows LSIL, 6 cases (1.18%) shows HSIL and 2 cases (0.39%) shows malignancy-squamous cell carcinoma.

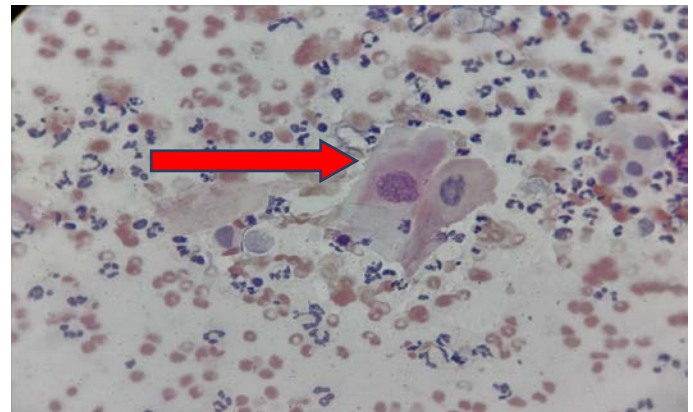


Fig 1: Low grade squamous intraepithelial lesion (LSIL) - CP.

Smear shows mature squamous cells with enlarged nuclei with variable chromatin and nuclear membrane.

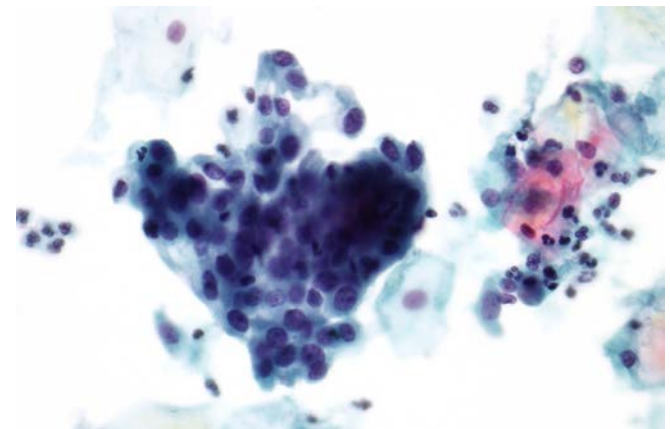


Fig. 2: High grade squamous intraepithelial lesion (HSIL) – Conventional Pap Smear shows features of

dysplasia including significant nuclear size variation admixed with inflammation.

Discussion

The present prospective study was conducted in the Department of Pathology, Jhalawar Medical College & Hospital, Jhalawar (Rajasthan), India. The study was conducted from June 2019 to May 2020. Cervical cytology samples from all the females of age 21 years and above with presenting complaints of white discharge per vagina, bleeding per vagina, post-coital bleeding, irregular menstruation and for routine cervical cancer screening were evaluated.

Cancer cervix is a leading cause of mortality and morbidity in developing countries like India most probably due to lack of proper screening facilities in the rural and suburban areas or due to the lack of awareness amongst the women of developing countries. Cervical cancer is the fourth most common cancer in the world. Developing countries accounted to about 80% of the global burden. Cervical cancer is the second most common cancer in women in India.⁹

So detection of its premalignant lesions is of utmost importance, which can be easily done by screening methods. The mainstay of cervical cancer screening is Papnicolaou (Pap) smear. Morbidity and mortality from cervical cancers have been shown to decrease substantially by the proper implementation of screening methods.

A Pap smear is a useful and an important method for cervical cancer screening. Worldwide, there have been efforts to prevent cervical cancer by screening women using PAP smears and thereby detecting and treating the precancerous lesions.¹⁰ Cervical cancer incidence can be reduced by as much as 90% in a population undergoing regular screening and having high quality and coverage.⁶³ However, in developing countries, due

to lack of education and awareness, many women have never had a Pap smear. Thereby, proper implementation of screening program is the need of the hour.

Sexually transmitted human papillomavirus (HPV) infection is the most important risk factor for morphologic continuum of squamous alterations.⁶⁴ Other factors include the age group of 35–45 years, coitus before 18, first delivery before 20, and multiple sexual partners.

Thus, the present study was conducted with the aim to study the pattern of various cervical lesion according to 2014 Bethesda system and to detect early cervical malignancy by PAP's cervical cytology among women attending tertiary care center Jhalawar Medical College, Jhalawar (Rajasthan).

In present study, a total of 508 smears were analyzed. Out of which 94.49% smears were satisfactory for evaluation. 29.72% shows normal smear and 52.56% shows benign cellular changes. 5.12% smears shows Bacterial vaginosis. 45.67% were inflammatory smears and 1.77% were atrophic smears. Similar to our study, Rawat K et al.¹¹, observed that 58.7% were abnormal Pap smears, 25.1% were normal Pap smears 16.1% smears had inadequate sample material to be examined. 92.01% smears reported to have inflammatory/reactive changes whereas 2.50% had atrophic changes in Pap smear and abnormality in epithelial cell was reported in 5.49% smears.

In our study, 2.16% shows ASCUS, 0.39% shows ASCH and 0.19% shows AGUS. 7.87% shows LSIL, 1.18% shows HSIL and 0.39% shows malignant squamous cell carcinoma. Similar to our findings, Rawat K et al.¹¹, observed that 5.4% (57/1039) of abnormal Pap smears and 3.22 % (57/1768) of total smears taken. According to studies by Misra JS et al.¹²,

and Patel TS et al.¹³, prevalence rates of abnormal epithelial changes ranges from 1.392-7.8% in India. Out of these 57 smears of abnormal epithelial changes there were 23 smears of ASCUS (40.35%), 5 smears of ASC-H (8.77%), 14 smears of LSIL (24.56%), 8 smears of HSIL (14.04%), 4 smears of AGUS (7.02%) and 3 smears of SSC (5.26%).

Conclusion

We concluded that premalignant and malignant lesions of cervix are not uncommon in our set up. Cervical cytology by Pap smear is a simple, safe and effective test to detect premalignant and malignant lesions of cervix at an early stage, and thus help the clinicians in early and more efficient management of the patients.

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