

Assessment and Importance of PAP Smear: An Hospital Based Study in Gynaecology Department

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ABSTRACT

Background: There is a need to spread cervical cancer screening awareness programs, educate women regarding the symptoms of cancer, and motivate them to visit the hospital for a cancer screening. Pap smear-positive women need adequate treatment and regular follow-up. Hence; we planned the present study to assess the importance of PAP Smear among women visiting the department of gynaecology.

Materials & Methods: A total of 100 subjects reporting to the OPD of gynecology department were enrolled in the present study. A self-framed questionnaire was used for obtaining detailed demographic data and clinical details of all the patients. Cytological sample were obtained from all the patients from ectocervix. All the samples were sent to laboratory where staining of the sample spread slides was done using PAP stain. All the results were recorded and analyzed by SPSS software.

Results: Inflammatory findings were reported in 66 percent of the patients, whereas atypical squamous cells of undetermined significance and Low-grade squamous intraepithelial lesion were reported in 12 percent of the patients each. Out of 40 patients with white discharge, 30 were found to have

inflammatory lesion on PAP staining. Non- significant results were obtained while correlating the clinical findings with pathologic findings.

Conclusion: PAP smear testing is a very cheap and time-saving screening tool for detecting epithelial pathologies. For routine mass screening of women, its use should be established and should be done more frequently.

Keywords: PAP Smear, Awareness, Cancer Screening.

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INTRODUCTION

Despite the established place of Papanicolou (Pap) smears in the prevention and early detection of cervical cancer, uptake of national cervical cytology programs remains a concern (the 2-year participation rate for the National Cervical Screening Program [NCSP] in 2009-2010 was 57.4% of women in the target age group).^{1,2} If detected early, cervical cancer is curable and the 5-year survival rate is as high as 92%. The idea behind the PAP-test is that cellular changes that may develop into cancer are detected at such an early stage that they can be removed through a simple operation, thus preventing the cancer.³⁻⁵

There is a need to spread cervical cancer screening awareness programs, educate women regarding the symptoms of cancer, and motivate them to visit the hospital for a cancer screening. Women and all family members should be counseled about the need for cancer screening. Pap smear-positive women need adequate treatment and regular follow-up.⁴⁻⁶ Hence; under the light of above mentioned data, we planned the present study to

assess the importance of PAP Smear among women visiting the department of gynecology.

MATERIALS & METHODS

The present study was conducted in the department of Obstetrics & Gynecology, Government Medical College, Barmer, Rajasthan, India.

It included assessment and importance of Pap smear among subjects reporting to the department. Ethical approval was obtained from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol.

Inclusion criteria

- Women complaining of vaginal discharge,
- Women complaining of blood-mixed discharge,
- Women complaining of intermenstrual bleeding,
- Women complaining of postmenopausal bleeding,
- Women complaining of secondary amenorrhea

After meeting the inclusion criteria, a total of 100 subjects were enrolled in the present study.

A self-framed questionnaire was used for obtaining detailed demographic data and clinical details of all the patients. Cytological sample were obtained from all the patients from

ectocervix. All the samples were sent to laboratory where staining of the sample spread slides was done using PAP stain.

All the results were recorded and analyzed by SPSS software. Chi-square test was used for assessment of level of significance.

Table 1: Age-wise distribution of patients

Age group (years)	Number of patients
Less than 25	33
25 to 40	38
More than 40	29

Table 2: Clinical symptoms

Symptoms	Number of patients
White discharge	40
Postcoital bleeding	25
Irregular cycle	20
Postmenopausal bleeding	10
Others	5

Table 3: Distribution of patients according to PAP findings

PAP findings	Number of patients
Inflammatory lesion	66
Atypical squamous cells of undetermined significance (ASCUS)	12
Low-grade squamous intraepithelial lesion (LSIL)	12
High-grade squamous intraepithelial lesion (HSIL)	10

Table 4: Clinico-pathologic correlation

Symptoms	Inflammatory lesion	ASCUS	LSIL	HSIL	p- value
White discharge	30	2	4	4	0.18
Postcoital bleeding	15	4	4	2	
Irregular cycle	14	2	1	3	
Postmenopausal bleeding	4	3	2	1	
Others	3	1	1	0	

RESULTS

In the present study, a total of 100 patients were analyzed, among which 38 percent belonged to the age group of 25 to 40 years. Mean age of the patients of the present study was 39.5 years. In the present study, inflammatory findings were reported in 66 percent of the patients, whereas atypical squamous cells of undetermined significance and Low-grade squamous intraepithelial lesion were reported in 12 percent of the patients each. Out of 40 patients with white discharge, 30 were found to have inflammatory lesion on PAP staining. Non-significant results were obtained while correlating the clinical findings with pathologic findings.

DISCUSSION

The Pap smear originally developed by George Papanicolaou in the 1930s to detect cervical cancer, is one of the most effective screening tools in the world. However, awareness of this test in general population is low. In India, it is estimated that 126,000

new cases occur every year.⁵ The conventional method of screening by cervical cytology requires repeated testing and a relatively sophisticated infrastructure. Therefore, alternative methods, such as visual inspection after application of acetic acid (VIA) and human papillomavirus (HPV) DNA testing have been developed. Studies on VIA have shown high sensitivity but low specificity, leading to high referral rates. Adjunctive testing using two tests in parallel or sequential combination improves specificity without compromising sensitivity.^{6,7}

Epidemiological evidence clearly indicates that the high-risk human papilloma virus (HPV) is the principal cause of cervical cancer and its precursor lesions. Cervical cancer can be effectively controlled through primary (prophylactic HPV vaccination) and secondary prevention (cervical screening). The Papanicolaou (Pap) test is widely used as a cancer-screening test.^{8,9}

In the present study, a total of 100 patients were analyzed, among which 38 percent belonged to the age group of 25 to 40 years.

Mean age of the patients of the present study was 39.5 years. Grigore M et al assessed the perception and the level of awareness of Romanian women regarding the Pap test in the prevention of cervical cancer. A cross-sectional study was conducted among 454 women from rural and urban areas. For their study, they used a questionnaire covering general characteristics, awareness, knowledge and practices regarding cervical cancer and Pap smear. 431 participants (95%) had heard of cervical cancer and Pap smear but only 71.8% knew the exact role of it. Bivariate analysis showed that knowledge about the importance of the Pap smear, early detection and treatment of early-stage cervical cancer was reduced among women with low socio-economic status, mainly living in rural area. The most frequent reasons for avoiding Pap smear screening were: lack of money, embarrassment or fear of gynaecological consultation and pain, the feeling that they don't need it, misconceptions about cervical cancer, fatalistic attitude, perceived low susceptibility to cervical cancer. Because the uptake and the success of cervical cancer screening are determined by women's knowledge and awareness of Pap smear, it is critical to improve these perceptions in the near future especially in rural area characterized by a low socio-economic status.¹⁰

In the present study, inflammatory findings were reported in 66 percent of the patients, whereas atypical squamous cells of undetermined significance and Low-grade squamous intraepithelial lesion were reported in 12 percent of the patients each. Out of 40 patients with white discharge, 30 were found to have inflammatory lesion on PAP staining. Non-significant results were obtained while correlating the clinical findings with pathologic findings. Sachan PL et al evaluated the use of the Pap smear screening method for detection of precancerous lesions. A total of 1650 women who were sexually active and over 21 years of age were enrolled in the study. A clinical examination, an examination per speculum, and a vaginal examination were performed and a history taken for all women. A Pap smear was used for all women to screen for cervical cancer. The smear was 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 Pathology for cytopathological examination. Vaginal discharge was the most common complaint, occurring in 36.96% of the women. An irregular menstrual cycle was the complaint of 12.78% and abdominal pain of 25.63% of women, while 15.15% were asymptomatic. The Pap smear test of 93.57% of the women was adequately taken, while 6.42% of the individuals had an inadequate sample. The test was negative for malignancy in 48.84%, and 42.66% had infection or inflammation. Atypical squamous cells of undetermined significance (ASCUS), low-grade squamous intraepithelial lesion (LSIL), and high-grade squamous intraepithelial lesion (HSIL) were detected in 2.90%, 5.09%, and 0.48%, respectively. Women with Pap tests positive for ASCUS, LSIL, and HSIL underwent a colposcopy and guided biopsy. A Pap smear is simple, noninvasive, cost-effective, and easy to perform for detection of precancerous lesions in a gynecological patient.¹¹

CONCLUSION

Under the light of above obtained data, the authors conclude that Pap smear testing is a very cheap and time-saving screening tool for detecting epithelial pathologies. For routine mass

screening of women, its use should be established and should be done more frequently.

REFERENCES

1. Vaghela BK, Vaghela VK, Santwani PM. Analysis of abnormal cervical cytology in papanicolaou smears at tertiary care center – A retrospective study. *IJBAR*. 2014;5:47–9.
2. Pradhan B, Pradhan SB, Mital VP. Correlation of PAP smear findings with clinical findings and cervical biopsy. *Kathmandu Univ Med J (KUMJ)* 2007;5:461–7.
3. Budge, M, Halford, J, Haran, M, Mein, J, Wright, G. Comparison of a self-administered tampon thinprep test with conventional pap smears for cervical cytology. *Aust NZ J Obstetrics Gynaecol*. 2005; 45(3): 215- 219.
4. Prevention of cervical cancer. *Cancer Council Aust*: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2736844/> [Accessed March 2012]
5. Gupta K, Malik NP, Sharma VK, Verma N, Gupta A. Prevalence of cervical dysplasia in Western Uttar Pradesh. *J Cytol*. 2013;30:257–62.
6. Ranabhat SK, Shrestha R, Tiwari M. Analysis of abnormal epithelial lesions in cervical pap smears in mid-Western Nepal. *J Pathol Nepal*. 2011;1:30–3.
7. Atilgan R, Celik A, Boztosun A, Ilter E, Yalta T, Ozercan R, et al. Evaluation of cervical cytological abnormalities in Turkish population. *Indian J Pathol Microbiol*. 2012;55:52–5.
8. Kulkarni PR, Rani H, Vimalambike MG, Ravishankar S. Opportunistic screening for cervical cancer in a tertiary hospital in Karnataka, India. *Asian Pac J Cancer Prev*. 2013;14:5101–5.
9. Jones, H, Wiegerinck, M, Nieboer, T, Mol, B, Westhoff, C, et al. Women in the Netherlands prefer self-sampling with a novel lavaging device to clinician collection of specimens for cervical cancer screening. *Sex Transm Dis*. 2008; 35(11): 916- 917.
10. Grigore M, Popovici R, Pristavu A, Grigore AM, Matei M, Gafitanu D. Perception and use of Pap smear screening among rural and urban women in Romania. *Eur J Public Health*. 2017 Dec 1;27(6):1084-1088. doi: 10.1093/eurpub/ckx112.
11. Sachan PL, Singh M, Patel ML, Sachan R. A Study on Cervical Cancer Screening Using Pap Smear Test and Clinical Correlation. *Asia Pac J Oncol Nurs*. 2018;5(3):337–341. doi:10.4103/apjon.apjon_15_18

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