

Cervical PAP Smears in Jahurul Islam Medical College Hospital - Experience of 558 cases

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Cervical cancer is one of the major cause of mortality among women worldwide. The present research aimed to study and analyze 558 pap smears from women presenting with various Gynaecological indications and as routine screening test. This study is carried out in the department of pathology of Jahurul Islam Medical College from the Pap smears coming from the Gynecology OPD from 2 September 2015 to 2 November 2016. Pap smears were taken from patients between ages 20 to 70 years presenting with different Gynecological complaints and as a routine screening test using Ayres Spatula. Smears were reported as per the 2004 Bethesda system. Of the 558 Pap smears studied 532 smears were satisfactory for evaluation. Among them 492 (92.4%) were inflammatory smear, 16 (3%) smears show low grade squamous intraepithelial lesion (LSIL), 4 (0.7%) smears showed high grade squamous intraepithelial lesion(HSIL), 4 (0.7%) smears show atypical cells suggestive of squamous cell carcinoma. Chronic per vaginal whitish discharge with itching was the most common complain (70.2% patients). Pap smear is easy and economical screening method to detect premalignant and malignant lesions of cervix which help in proper treatment.

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Key words: Pap smear, HSIL, intraepithelial lesion, LSIL, carcinoma, cervix

Introduction

Cervical cancer is the fifth most common cancer in humans, the fourth most common cancer in women worldwide. It is the most common cancer death in women in the developing countries.¹ Screening of cervical cancer in effective, feasible and affordable way for early detection and management is a public health priority. Five screening methods namely;

naked eye visual inspection of the cervix with application of diluted acetic acid (VIA), examination with Lugol's Iodine (VILI) or with a magnifying device (VIAM), the Pap smear and Human Papilloma Virus (HPV) testing with high-risk probe of the Hybrid Capture-2 assay (HC2) is used to detect the cervical cancer in precancerous stage.²

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Cytology is a simple and inexpensive diagnostic method and is therefore useful especially in areas with limited resources. Even though the Pap smear test alone does not have a high sensitivity and specificity, it is the most commonly used test in most screening programs. The diagnostic utility of cervicovaginal cytology (Pap test) as a first line of investigation has assumed importance in screening of cervical cancer. It is a simple, safe, cost effective and reliable technique. Its accuracy and cost effectiveness can be compromised by inadequate samples.³ Usually Pap smear screening test is recommended starting around 21 years of age until the age of 65 years. Can be repeated at three years interval. In case of abnormal Pap smear report, depending on the type of abnormality the test may need to be repeated in six to twelve months. More sensitive and specific investigations like colposcopy guided cervical biopsy etc are needed to diagnose and prevent further progression to cervical cancer.⁴

The aim of the study was to study and analyze the pap smear reports and to help planning the treatment of patients accordingly.

Methods

The study was carried out in the department of pathology of Jahurul Islam Medical College from the Pap Smears coming from the Gynaecology OPD from 2 September 2015 to 2 November 2016. A total of 558 pap smears were taken from women between ages of 20 to 70 years presenting with different Gynecological complaints and as a routine test. Smears were reported as per the Bethesda system.⁵

Inclusion criteria - Women between 20 to 70 years of age.

Exclusion criteria - Women below 20 years and above 70 years.

Procedure

Pap smears are taken by using Ayres Spatula. The broad end of spatula was placed on the Cervix and rotated through 360° and the collected material was spread over a glass slide. The oblong relabeled narrow end of spatula was used to take smear from posterior vaginal fornix and spreaded over a second glass slide. All the slides were labeled and immediately transferred to 95% Ethyl alcohol (Transport Medium) and sent to Pathology Department for Cytological study.

Evaluation was done by Cytology using Bethesda Classification:⁵

- i. Within normal limits
- ii. Infection (specify organism)
- iii. Reactive/reparative changes
- iv. Atypical squamous cells of undetermined significance (ASCUS)
- v. Atypical glandular cells of undetermined significance (AGUS)
- vi. Low Grade Squamous intraepithelial invasion (LSIL)
- vii. High Grade Squamous intraepithelial invasion (HSIL)
- viii. Invasive carcinoma

Statistical Analysis

Data was analyzed by SPSS and descriptive statistics were presented as frequencies and percentages.

Results

In our study we analyzed 558 Pap smears taken from women coming to Gynecology OPD of Jahurul Islam Medical College Hospital, Bajitpur, Kishoreganj between age 20 to 70 years presenting with different Gynecological complaints and as routine screening test. Among them 405 (72.5%) patients were between age 20 to 39 years, 112 (20.1%) patients were between 40 to 49 years, 29 (5.1%) women were between 50 to 59 years and 12 (2.1%) patients were between age 60 to 70 years (Table I).

Table I: Distribution of patients according to age (n=558)

Age in years	No	%
20- 29	125	22.4%
30 - 39	280	50.1%
40 - 49	112	20.1%
50 - 59	29	5.1%
60-70	12	2.1%
Total	558	100%

Among the 558 women undergoing Pap smear tests, 392 (70.2%) women presented with chronic white discharge with itching. 112 (20.1%) women underwent Pap smear test as part of routine gynecological examination. 16 (2.8%) women presented with pelvic inflammatory disease. 8 (1.4%) women presented with post hysterectomy chronic white discharge. 12 (2.1%) women had abnormal uterine bleeding and 8 ((1.4%) women presented with intermenstrual spotting (Table II).

Table II: Reasons for performing PAP smears (n=558)

Reasons for performing Pap smears	No	%
Chronic white discharge with Itching	392	%
Routine Pap smear	112	%
Pelvic inflammatory disease	16	%
Post hysterectomy chronic white discharge	8	%
Abnormal uterine bleeding	12	%
Intermenstrual spotting	8	%
Total	558	100%

Among the 558 Pap smear reports analyzed, 26 (4.6%) smears were unsatisfactory for evaluation. Among the 532 satisfactory smear reports showed inflammatory changes in 492 (92.4%). 16 (3.0%) smears were reported as Low grade squamous intraepithelial lesion (LSIL). High grade squamous intraepithelial lesion (HSIL) was seen in 04 (0.7%) smears. Atypical squamous cells of undetermined significance (ASCUS) was seen in 10 (1.8%)

smears. Suggestive of squamous cell carcinoma was diagnosed in 4 (0.7%) smears (Table III).

Table III: PAP smear findings (n=558)

Pap smear analysis reports	No	%
Unsatisfactory smears	26	4.6%
Inflammatory smear	492	92.4%
Low grade squamous intraepithelial lesion (LSIL)	16	3.0%
High grade squamous intraepithelial lesion (HSIL)	04	0.7%
Post Hysterectomy smear with normal finding	06	1.1%
Atypical squamous cells of undetermined significance (ASCUS)	10	1.8%
Suggestive of Squamous cell carcinoma	04	0.7%
Total	558	100%

Discussion

Conventional cervical cytology is the most widely used cervical cancer screening test in the world. Cervical cytology screening programme in several developed countries have been associated with impressive reductions in cervical cancer burden. The WHO recommends that in developing countries, women aged between 18-69 years should be screened for cervical cancer every 3 years⁶. In our study, the youngest age screened was 20 years and oldest age was 69 years, maximum number of women were between 30 to 39 years age group (50.1%). In study conducted by Bamanikar et al⁷ maximum number of women were between 31 to 40 years age group (32.68%). In study conducted by Patel et al⁸ maximum number of women were between ages 15 to 30 years. The rate of unsatisfactory smear was 4.6% in this present study which is high compare to study conducted by Bhatla et al⁹ (1.36%). The unsatisfactory rate is an important quality assurance indicator in cervical cytology as it identifies women who are being inadequately screened. High rate of unsatisfactory smears could be due to sampling errors. Hence regular training and feed back is essential.

Inflammatory smear reports were 492 (92.4%) in our study, whereas in study conducted by Bamanikar et al 71.96% reports were inflammatory smear. Smears showing ASCUS (Atypical squamous cells of undetermined significance) were 10 (1.8%) in our study which is different from the study by Patel et al showing ASCUS in 41(4.1%) of the smear. Smears showing LSIL (Low grade squamous intraepithelial lesion) were 16 (3%) in our study. In study conducted by Patel et al reports showing LSIL were 41(0.1%). In our study HSIL (High grade squamous intraepithelial lesion) reports were 4 (0.7%), whereas in study conducted by Bamanikar et al 2(0.3%) reports gave HSIL which is consistent with the present study. Smears showing atypical cells present suggestive of squamous cell carcinoma were 4 (0.7%) in our study. In study conducted by Patel et al. reports showing squamous cell carcinoma were in 0.7% of smears.

It is seen that reports in our study like many other studies has shown the importance of Pap smear test in screening cervical cancer and guide the clinician about their treatment strategy. By increasing health awareness and performing Pap smear screening programme the incidence of cervical carcinoma can be decreased.¹⁰

Conclusion

Pap smear tests are inexpensive and affordable by the patients. This Procedure doesn't need experts and specialists for collection of smear. Early detection of possibility of malignancy helps in prompt treatment at early stage and prolongation of life expectancy of many women and reduce the mortality and morbidity of cancer cervix. Till today Pap smear test is the most useful screening procedure for cervical cancer.

References

1. Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *Int J Cancer*. 2015; 136: 359-386.
2. Tamrakar SR, Chawla CD. A Clinical Audit of Pap Smear Test for Screening of Cervical Cancer. *Nepal J Obstet Gynecol*. 2014; 7: 21-24.
3. Narasimha A, Vasavi B, Kumar H, Sapna M. An audit of Pap smear cytology. *J South Asian Federation Obstet Gynecol*. 2011; 3: 121-124.
4. Mehmetoglu HC and Sadikoglu G. Pap smear screening in the primary health care setting: A study from Turkey. *N Am J Med Sci*. 2010;2:1-28.
5. Jeffcoate's principles of Gynecology, 7th edition, 2008. Chapter 25, page.416.
6. WHO/ICO Information Centre on HPV and Cervical Cancer (HPV Information Centre). Summary report on HPV and cervical cancer statistics in India. 2007.
7. Bamanikar SA, Baravkar DS, Chandanwale SS and Dapkekar P, Study of Cervical Pap smears in a Tertiary Hospital. *Indian Medical Gazette*. 2014:250-254.
8. Patel MM, Pandya AN, Modi J, Cervical Pap smear study and its utility in cancer screening, to specify the strategy for cervical cancer control. *National Journal of Community Medicine*. 2011;2:1:49-51.
9. Bhatla.N, Gulati A, Mathur SR, Anand K, Muwonge R et al evaluation of council screening in rural north India. *Int. J. Gynaecol Obstet*. 2009.105:145.
10. Idestrom M, Milsom I, Andersso-Ellstrom A. Knowledge and attitudes about the Pap-smear screening program: a population-based study of women aged 20-59 years. *Acta Obstet Gynecol Scand*. 2002;81:962-7.