



Study of Cervical Lesions among Women Workers in a Tertiary Care Hospital

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Abstract

Cervical cancer is the most common cancer among the women worldwide. It has a very long precancerous period which provides a considerable time to detect and treat it. Certain strains of Human Papilloma Virus (HPV) infections which is a common sexually transmitted infection is the primary cause of cervical cancer. Cofactors like other infections, immunocompromised status and tobacco use also play role in progression to frank cancer. The present study was carried out to screen precancerous and cancerous lesions of cervix in women working in tertiary care hospital.

Aims and Objective: *To study cervical lesions using Pap smears among women workers in a tertiary care hospital and analysis of results of Pap Smears studies in two months period. (February 2017-march 2017).*

Material and Methods: *101 Pap smears were collected among working women in age group of 25-55 years in our hospital in the month of February 2017 and March 2017 and the smears were evaluated according to Bethesda 2014 Guidelines.*

Result: *The study included 101 cases out of which 54(53.46%) were inflammatory smears, 11 (10.89%) out of 54 smears revealed reactive atypia, 33 smears (32.67%) revealed no significant pathology. Low Grade Squamous Intraepithelial Lesion (LSIL) was seen in 9 (8.9%) cases while 5 smears (4.95%) were inadequate. Amongst these HPV cytopathic effect was seen in 4 cases of LSIL and 2 cases of inflammatory smears. These cases underwent colposcopic examination and will be followed up for six months.*

Conclusion: *Screening of asymptomatic women workers has yielded significant information. Earlier detection of HPV cytopathic effect and LSIL can offer prompt treatment and cure at the precancerous stage.*

Keywords: *Cervical Pap smears, Screening test, Precancerous lesions.*

Introduction

Cervical cancer is the most common cancer among the women worldwide. It has very long precancerous period which provides a

considerable time to detect and treat it. Certain strains of Human Papilloma Virus (HPV) infections which is a common sexually transmitted infection is the primary cause of cervical

cancer^{1,2,3}. Cofactors like infection, immunocompromised status and tobacco use also play role in progression to frank cancer. Conventional Pap smear technique is currently used as screening test for cervical cancer^{4,5}. The present study was carried out to screen precancerous and cancerous lesions of the cervix in women working in our institute that is a tertiary care hospital.

Material and Methods

Study Design- The study was conducted among women workers in a tertiary care hospital during the period of two months from February 2017 to March 2017 and included evaluation of Pap smears as a screening tool for detection of inflammatory, precancerous and cancerous lesions of cervix.

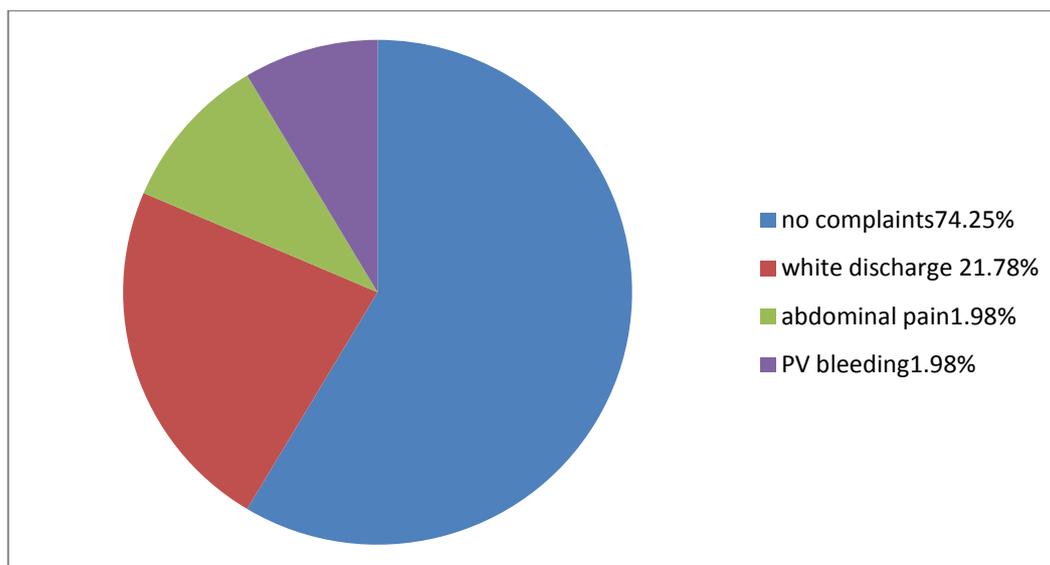
Inclusion and Exclusion Criteria

Women working in a tertiary care hospital were selected for study,

Women who have undergone hysterectomy as well as nulliparous women were excluded.

The study was done after consent from ethical committee of our institute. Informed consent was taken from patient and all the rules regarding ethics committee consideration were followed.

Figure No-1 Clinical Presentation



23 % females had done Pap smear screening test earlier while 77% had done it as a first screening

Pap smears were taken by trained gynaecologist by standard technique. Slides were fixed in ether alcohol immediately after making and labeling smears and were subsequently stained by Pap Smears. The smears were evaluated according to Bethesda 2014 guidelines.

Result

Age distribution of cases

Total 101 cases of Pap smears were obtained. Age group ranged from 24 to 56 years. Maximum number of patients (41.58%) were in the age group of 31 to 40 years (4th decade) followed by 41 to 50 years age group (33.66%).

Table 1 Age distribution of cases

Age range	No of cases	% age
21-30 yrs	11	10.89%
31-40yrs	42	41.58%
41-50yrs	34	33.66%
51-60yrs	14	13.86%

Clinical Presentation

As the Pap smears were taken as a routine checkup, 75 cases (74.25%) presented with no complaints. 22 cases (21.78%) complained of white discharge. 2 cases each (1.98%) presented with PV bleeding and abdominal pain.

Pap Smears Results

Table 2 Results of Pap Smears

Pap Smears finding	No of cases	% in total
Unsatisfactory	5	4.95%
Normal Smears	33	32.69%
Abnormal Smears	63	62.37%
Total	101	100%

Abnormal Pap smears included inflammatory Pap smears 54 cases (53.46%) and Low Grade Squamous Intraepithelial Lesion (LSIL) 9 cases (8.9%). Amongst these HPV cytopathic effect was seen in 6 cases which included 4 cases of LSIL and 2 cases of inflammatory smears.

Inflammatory Pap Smears

54 cases revealed inflammatory Pap smears (53.46%). 11 cases (20.37% of inflammatory smears) revealed reactive atypia. HPV cytopathic effect was seen in 2 cases (3.7% of inflammatory smears), In remaining cases no specific etiological agent was found.

Amongst 54 cases of inflammatory pap, 38 cases (70.37%) came with no significant complaint while 13 cases (24.07%) presented with white PV discharge. Abdominal pain and PV bleeding was observed in 2 cases (3.7%) and 1 case (1.85%) respectively.

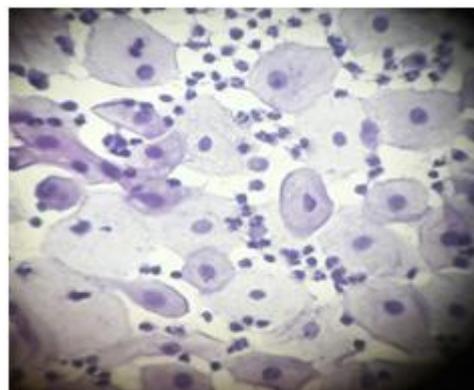


Figure 2- Pap stain 400x- Inflammatory smears with reactive atypia.

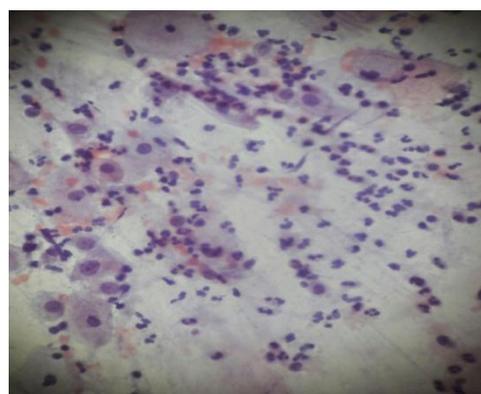


Figure 3- Pap stain 100x- Inflammatory smears with reactive atypia.

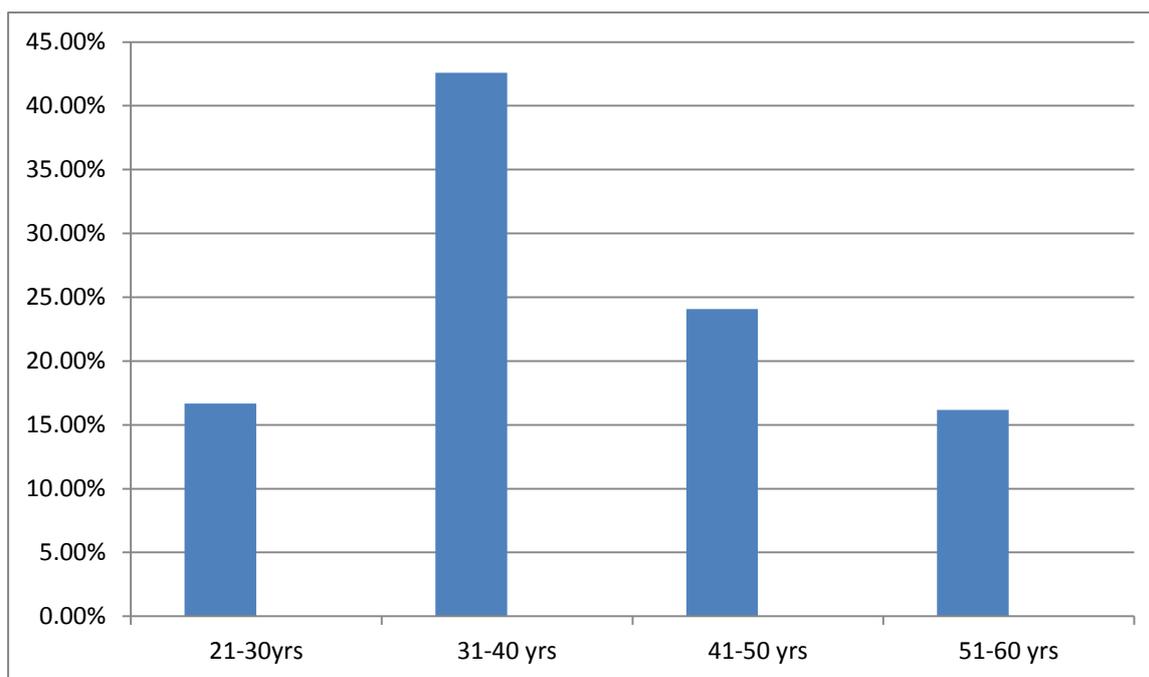


Figure 4-Age distribution of inflammatory Pap Smears

Squamous Intraepithelial Lesion

Out of 101 cases of pap smears 9 cases (8.9%) revealed LSIL. Maximum number of cases (5 cases – 55.55%) were in the age group of 41- 50 years followed by 2 cases (22.22%) in the age group 31-40 years. 1 case each (11.12%) was in age group of 21-30 years and 51-60 years.

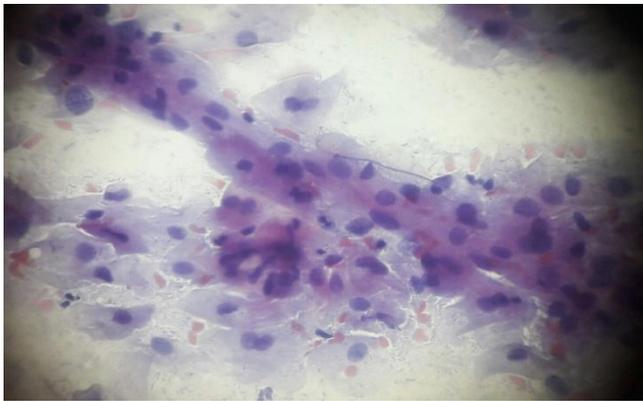


Figure 5- Pap Stain 400x Low grade squamous intraepithelial lesion.

HPV effect was seen in 4 (44.44%) of these cases. HPV effect was seen in the form of koilocytic change in all cases. In addition 2 cases revealed mild karyomegaly with dyskeratosis and irregular nuclear borders.

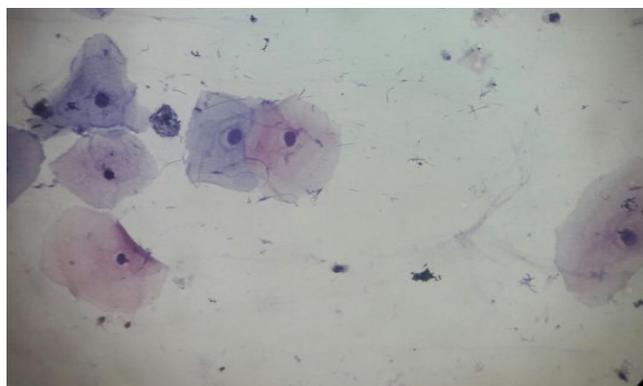


Figure 6 Pap stain 400x HPV effect- Koilocytic change.



Figure 7 Pap stain400x- HPV effect- dyskeratosis

Discussion

Maximum number of patients in our study were in the age group of 31 to 40 years. Similar observation was noted by other studies^{6,7}. As the study was done for screening of cervical lesions, only 26 cases (25.74%) presented with symptoms. The commonest symptom was vaginal discharge (21.78%) followed by lower abdominal pain. Other authors have also noted similar clinical presentation^{8,9,10}

The rate of inadequacy of material was 4.95%. This rate ranged from 1% to 5.7% with other studies.^{6,10}

The study determined 54 cases (53.46%) of inflammatory lesion as the predominant one. 70% of these patients were asymptomatic. Other studies also have noted similar observation.^{6,9,10,11}. Epithelial cell abnormality was seen in 9 cases (8.9%). This rate of epithelial cell abnormality varied from 1.5 % to 12% in various studies.^{12,13}

We did not observe a case of high grade squamous intraepithelial lesion and squamous cell carcinoma as the smears were taken as a screening tool in working women.

HPV cytopathic effect was seen in 6 cases (5.94%) in our study. The rate of HPV effect was higher in other study which was conducted in symptomatic patients.⁷

Screening of asymptomatic women workers has yielded significant information. Patients with reactive atypia can be totally cured with effective treatment. Also in patients with squamous intraepithelial lesion and patients with cytopathic effect further progress of the lesion to cervical cancer can be prevented with follow up and effective treatment. Hence all the women should have atleast one Pap screening test done before the age of 45 years.

Conclusion

Screening for cervical lesions is an important tool for early detection and prevention of cervical cancer. Earlier detection of HPV cytopathic effect and LSIL can offer prompt treatment and cure at the precancerous stage.

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References

1. Nobbenhuis M., Walboomers J., Helmerhorst T., Rozendaal L., Remmink A., Risse E., van der Linden H., Voorhost F., Kenemans P & Meijer C. Relation of HPV status to cervical lesions and consequence for cervical screening: A prospective study. *Lancet*. 1999, 354:20-25.
2. Walboomers J., Jacob M., Manos M., Bosch F., Kummer J., Shah K., Snijders P., Peto J., Meijer C and Munoz N. Human Papilloma Virus is a necessary cause of invasive cervical cancer worldwide. *J Pathol*. 1999, 189: 12-19.
3. Munoz N., Bosch F., de San Jose S., Herrero R., Castellsague X., Shah K., et al. Epidemiologic classification of Human Papilloma Virus types associated with cervical cancer. *N Engl J Med*. 2003, 348:518-527.
4. Burrow OA, Howell LP, Hinricks S, Richard O, Cytomorphological features in the diagnosis of Human Papilloma Virus infection of uterine cervix. *Acta Cytol* 1990;34:737-738.
5. Tanaka H, Chua KL, Lindh E, Hjerpe A. Patients with various types of Human Papilloma Virus covariation and diagnostic relevance of cytological findings in Papanicolaou smears. *Cytopathol* 1993,4:273-283.
6. Bamanikar S.A, Baravkar D.S, Chandanwale S.S et al. Study of cervical Pap smears in a tertiary hospital. *Indian Medical Gazette* 2014:250-254.
7. Gurjar P, Patil N, Bonde V. Detection of Human Papilloma Virus in cervical Pap smears and with polymerase chain reaction technique in the rural area of Western Maharashtra, India. *Int J Reprod Contracept Obstet Gynecol*. 2016 ;5(8):2648-2651.
8. Pradhan B, Pradhan S.B., Mital V.P.- Correlation of Pap smear findings with clinical findings and cervical biopsy. *Kathmandu University Medical Journal*; 2007;5; 4(20):461-467.
9. Ranabhat , S. K., Shrestha, R., Tiwari, M._ Analysis of abnormal epithelial lesions in cervical pap smears in Mid-Western Nepal. *Journal of Pathology of Nepal* 2011;1,30-33.
10. Verma A, Verma S, Vashist S et al. A study on cervical cancer screening in symptomatic women using Pap smear in a tertiary care hospital in rural area of Himachal Pradesh , India. *Middle East Fertility Society Journal*; 2017;22 (1):39-42.
11. Remzi Atilgan, Aygen Celik, Abdullah Boztoson, Erdin Ilter, Tulin Yalta- Resat Ozercan. Evaluation of cervical cytological abnormalities in Turkish population. *Indian J Pathol Microbiol*; 2012 55(1),52-55.
12. Turkish Cervical Cancer And Cervical Cytology Research Group: Prevalance of cervical cytological abnormalities in Turkey. *Int J Gynaecol Obstet* 2009; 106:206-209.
13. Ghaith J.E., Rizwana B.S.- Rate of opportunistic Pap smears screening and patterns of epithelial cell abnormality in Pap smears in Ajman, United Arab Emirates. *Sultan Qaboos Univ Med J* 2012;12(4):474-478.