CERVICAL PAP SMEAR STUDY IN A TERTIARY CARE TEACHING HOSPITAL

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Article Info: Received 25 January 2019; Accepted 16 February. 2019

Cite this article as: Khushnood, M., Gameti, P. V., Rajani, A., & Jain, M. (2019). CERVICAL PAP SMEAR STUDY IN A TERTIARY CARE TEACHING HOSPITAL. *International Journal of Medical and Biomedical Studies*, 3(2).

DOI: <https://doi.org/10.32553/ijmbs.v3i2.100>

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Conflict of interest: No conflict of interest.

Abstract

Background: Mortality due to cervical cancer is also an indicator of health inequalities, as 86% of all deaths due to cervical cancer are in developing countries, low- and middle-income countries. Though Pap smear is a routine screening test, the overall sensitivity in detection of high grade squamous intraepithelial lesion (HSIL) is 70 - 80% .Pap smear is a simple, safe, non-invasive and cost effective method for the detection of pre-cancerous, cancerous and benign lesions of cervix.

Materials and Method: Around 100 cases attending gynecology OPD consented to participate were selected between age 15-60years with complaints. Pap smear was taken and was reported by cytopathologists according to the 2001 Bethesda system. All the data were manually collected and subsequently analyzed.

Results: Maximum number of cases (37%)were seen in the age group of 31-40 years followed by 41-50 years (29%)and rest between 21-30 years (26%). 8% cases were seen in the age group of 51-60 years. NILM was reported in 48% of cases. Inflammatory smears were seen in 44% of cases. Two smears were reported as unsatisfactory.02% of cases was reported as ASCUS.LSIL was reported in 02% of cases while HSIL were reported in 01% of cases. Non specific findings were reported in 01 case.

Conclusion: This study proves that PAP stain is a simple, cheap, inexpensive and easy procedure and that using PAP stain cytological screening programs conducted in developing countries can play a major role in reducing mortality and morbidity due to Cancer Cervix.

Keywords: PAP stain, Cervix, Cancer

Introduction:

Cancer of the cervix is a global health problem, comprises approximately 12% of all cancers

among women globally¹.According to National Cancer Registry Program of India, cancers of uterine cervix and breast are leading malignancies seen in Indian women².Cervical

cancer is the most common cause of cancer related deaths among women in developing countries. Mortality due to cervical cancer is also an indicator of health inequalities, as 86% of all deaths due to cervical cancer are in developing countries, low- and middle-income countries³. The Pap test was introduced by George Papanicolaou as a cervical pathology screening test in 1941⁴. Cancer of cervix is readily preventable, by early detection and appropriate timely treatment of its precursor lesions by simple Pap screening test. Though Pap smear is a routine screening test, the overall sensitivity in detection of high grade squamous intraepithelial lesion (HSIL) is 70 - 80%⁵. Pap smear is a simple, safe, non-invasive and cost effective method for the detection of pre-cancerous, cancerous and benign lesions of cervix⁶. 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 interval⁷.

Materials and methods: This retrospective study was carried out over 1 year at the Department of Pathology, Government Medical College, Dungarpur. Around 100 cases attending gynecology OPD consented to participate were selected between age 15-60 years with complaints. A sample was taken from the cervix by rotating a wooden Ayre spatula 360°. The sample was quickly smeared onto a labeled glass slide and fixed with 95% ethyl alcohol in a jar and stained with Pap stain. Required clinical history of the patients was obtained from the requisition forms and patient's file. All the smears were reported by cytopathologists according to the

2001 Bethesda system. All the data were manually collected and subsequently analyzed.

Inclusion criteria: Age > 21 years.

Exclusion criteria: Unmarried females, pregnant women and already diagnosed cases of cervix carcinoma. Ethical clearance to do this retrospective study.

Observation:

A total of 100 cases were evaluated the age of the patients varied from 21 to 60 years. Maximum number of cases (37%) were seen in the age group of 31-40 years followed by 41-50 years (29%) and rest between 21-30 years (26%). 8% cases were seen in the age group of 51-60 years. Neoplastic lesions were more common in the age group of 41-50 years. Detailed history was taken and evaluated and commonest chief complaint of cases were found to be vaginal discharge (39%) followed by patients coming for routine PAP (29%), cases presented with post-menopausal bleed (11%), asymptomatic cases (06%), intermenstrual bleeding (05%), abnormal uterine bleeding (04%) and 04% cases presented with something coming out pv. The Bethesda system of reporting (2014) was applied. Among 100 pap smear reports evaluated possibility of malignancy were ruled out in 48% of cases. Inflammatory smears were seen in 44% of cases. Two smears were reported as unsatisfactory. 02% of cases was reported as ASCUS. LSIL was reported in 02% of cases while HSIL were reported in 01% of cases. Non specific findings were reported in 01 case.

Table 1: Distribution of patients according to age:

Age group (years)	Number of patients	% of patients
21-30	26	26
31-40	37	37
41-50	29	29
51-60	08	08
Total	100	100

Table 2: Chief complaints of cases:

Complaints	Number of patients complaining	% of patients complaining
Asymptomatic	06	06
Vaginal discharge	39	39
Inter menstrual bleeding	05	05
Abnormal uterine bleeding	04	04
Something coming out pv	04	04
Post-menopausal bleed	11	11
Routine PAP smear	29	29
Others	02	02
Total	100	100

Table 3: Cytological findings of PAP stain:

Findings on PAP smear	Number of patients	% of patients
Unsatisfactory	02	02
NILM	48	48
Inflammatory	44	44
Nonspecific findings	01	01
ASCUS	02	02
ASC-H	0	0
LSIL	02	02
HSIL	01	01
SCC	0	0
Others	0	0
Total	100	100

ASCUS - Atypical squamous cells of undetermined significance

ASCH - Atypical squamous cells cannot exclude HSIL

LSIL - Low grade squamous intraepithelial lesion

HSIL - High grade squamous intraepithelial lesion

SCC - Squamous cell carcinoma

NILM - Negative for intraepithelial or malignancy

Discussion:

The majority cases were seen in between 31-40 years followed by 41-50 years. These findings are similar to findings with other studies. Some variations in data could be due to smaller database of our study. Considering the fact that the common age to develop cervical cancer is between 40 and 50 years and its precursor lesion usually occurs 5–10 years earlier⁸ and that mass screening should be started as early as possible. From the above finding we conclude that

screening by Pap smear should start at the age of 21 years and above; if we catch them early we can prevent further development of cancer. This study determines 48% cases of negative for any intraepithelial lesion or malignancy with non-specific inflammation cases as 44% as the predominant one. P Vijaya et al⁹, Chandni et al¹⁰, Sunita et al¹¹, Ashok et al⁸ revealed 04%,86%,88% and 56% cases of NILM respectively. Inflammatory smear reports were 40 % in our study while Ashok et al, showed 32.5% , P.Vijaya Lakshmi et al showed 67% of

cases, Mandakini et al¹² reported 57.48% of inflammatory cases. Neoplastic lesions .Total of ASCUS,LSIL,HSIL cases in present study are as 2%,2%,1% respectively .In other studies also these cases varies between 0.3-7% .With the changes in the life styles and demographic profiles in developing countries, non-communicable diseases are emerging as an important health issues which require appropriate and timely control program before they evolve as an epidemic propagation. Among non communicable diseases Cancer is one of the major causes of morbidity and mortality hence awareness campaigns and large scale Pap screening programmes for women should be propagated especially in the high risk group.

Conclusion:

It is accepted worldwide that early detection of precancerous lesions of cervix can be done by cytological examination of cervix by Pap smears. If not diagnosed and treated early, these precancerous lesions are likely to progress to invasive Cancers. This study proves that PAP stain is a simple, cheap, inexpensive and easy procedure and that using PAP stain cytological screening programs conducted in developing countries can play a major role in reducing mortality and morbidity due to Cancer Cervix.

Abbreviations:

PAP- Papanicolaou

ASCUS - Atypical squamous cells of undetermined significance

ASCH - Atypical squamous cells cannot exclude HSIL

LSIL - Low grade squamous intraepithelial lesion

HSIL - High grade squamous intraepithelial lesion

SCC - Squamous cell carcinoma

NILM - Negative for intraepithelial or malignancy

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