



ROLE OF PAP SMEAR IN SCREENING OF CERVICAL LESIONS IN A TERTIARY CARE HOSPITAL: A 6 MONTH PROSPECTIVE STUDY

Pathology

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ABSTRACT

Aim: To estimate the scenario of cervical lesion in Vindhya Region by the help of pap smear test.

Material and Method: Cervical/Vaginal exfoliative smears were stained by Pap stain and Giemsa Stain and microscopy were done. Smears were categorized according to The Bethesda System 2001.

Result: Total 400 smears were examined with 97.5% satisfactory smear, having maximum cases of 25-35 yrs age group. Of the total cases studied, NILM far exceeds the ECA. Total 06 cases of Squamous cell Carcinoma detected during our six month prospective study.

KEYWORDS

Pap smear, cervical lesions, NILM, LSIL, HSIL, Squamous Carcinoma

INTRODUCTION

The most common cancer of women in our country is breast cancer, followed by cervical cancer^[1]. The Pap smear test is a simple, non-invasive, and a cost-effective method for the diagnosis of cervical and vaginal precancerous, cancerous lesions^[2]. Detection in early stages is important because early stage is 100% curable, and reduces the morbidity and mortality from invasive cervical carcinoma.

Approximately 70% of the global burden of cancer falls on less developed countries, with more than one-fifth of all new diagnosed cases from India^[3]. The most common lesions of the female genital tract are inflammatory lesions and parasitic lesions. Although, some inflammatory lesions such as Trichomonas and HPV are forerunners of malignancy.

Papanicolaou smears referred to a pap smear, was introduced by George V Papanicolaou who laid the foundation of Exfoliative cytology. It was introduced initially for vaginal smears, and it ushered a new era in the diagnosis of pre-invasive and invasive cervical cancer. In-fact, it can be said that cytological technique of cancer detection represents perhaps the most important development in art of diagnosis against cancer in the 20th century. Vaginal/cervical cytology is supposed to be single most useful method for timely detection of cervical malignancy. The accessibility of cervix, the propensity of cells to exfoliate from precancerous lesion, the evidence from pathological studies of existence of spectrum or histological changes form mild atypical through premalignant lesions to frank malignancy and apparently prolonged natural history provide best potential for the success of population screening programme for cancer cervix.

The distribution of age specific incidence rates of cervical cancer in Indian registries shows that, disease does not occurs below 20 year of age and increases from the age of 55-65 years. Areas with lower incidence rate show lower incidence in all the age groups suggesting that the responsible etiological factors operate over all the ages.

The purpose of this study was to evaluate the entire spectrum of Cervico-vaginal cytological abnormalities like Inflammatory, Precancerous and Cancerous lesions among females undergoing routine screening at Gandhi Memorial Hospital, SSMC Rewa and also to find prevalence of these lesions in Vindhya Region.

MATERIAL AND METHODS

The present study was carried out at Department of Pathology, S.S. Medical College Rewa (M.P.), over the period of 6 month from Aug 2017 to Jan 2018, the material for the present study comprised of examination of 400 cervical/vaginal smears, taken from patients attending Gandhi Memorial Hospital (a tertiary care hospital).

The cases were examined in details and findings are recorded on the standard proforma. First a careful history of the patients was taken. Complaints noted in the order of importance and duration. A detailed obstetric, menstrual, contraceptive history has been noted. A detailed general physical, systemic and per speculum examination were also carried out beside visualization of the cervix. The woman who completed the questionnaires had pap smear collected from them by Ayer's spatula. The smear was uniformly spread on two pre labeled frosted slides and promptly immersed into 98% Alcohol for fixation. The smears were stained by Giemsa and papanicolaou method. The data were analyzed using SPSS and statistical comparison was done using chi-square test and fisher exact test the level of significance was accepted when p-value 15 equal to or less than 0.05

RESULT

In the present study, Pap smears were taken from 400 patients who were preferably more than 25 years of age, symptomatic or with some chronic lesion of cervix, attending and admitted in Gandhi memorial hospital associated with S.S. medical college Rewa (M.P.). Of the 400 cases, 390 (97.5%) were satisfactory for evaluation. Maximum cases were from age group 25-35 years (52.5%) as depicted in table 01

Table no.1 Age distribution of the patients

Age (years)	Total No. of cases
25-35	210 (52.5%)
36-45	108 (27%)
46-55	52 (13%)
>55	30 (7.5%)

Majority of cases were in the range of NILM as shown in table no. 2:

Table:2

A.	Normal smears	40 (10%)
B.	Benign cellular change	272 (68%)
I.	Specific infection	42(10.5%)
A.	Trichomonas	20 (5%)
B.	Gradnerella	22 (5.5%)
II	Reactive changes	230 (57.5%)
a.	Inflammatony smear	216 (54%)
b.	Atrophic smear	10 (2.5%)
c.	Endocervicitis	4 (1%)

78 (19.5%) cases shows epithelial abnormalities including ASCUS and AGUS (26 cases) 6.5%, 30 cases (7.5%) L-SIL, 16 cases (4%) H-SIL and 6 case (1.5%) carcinoma (Table03)

Table:03

	Epithelial cell abnormality	78 (19.5%)
a.	Atypical epithelial cells	26 (6.5%)
1.	ASCUS	24
2.	AGUS	2
b.	L-SIL, HPV change, mild dysplasia, CIN I	30 (7.5%)
c.	CIN II & III	16 (4%)
d.	Malignant	6 (1.5%)

Age related distribution of cervical lesions are depicted in Table 04

Table:04

Age in year	Total No of cases	L-SIL	H-SIL	Ca. Cervix
25-35	210	10	4	-
36-45	108	12	6	-
46-55	52	4	4	4
>55	30	4	2	2

DISCUSSION

The Pap test is the only test in our settings that has been used in widespread screening programs for cervical lesions. The prevalence studies around the world with reference to the epithelial abnormalities, which was the main motive for advocating custom cervical smear examination, has shown a widespread range from as low as 0.98%^[4] to as high as 15.6%.^[5]

If we deem countries such as Unites States Of America (U.S.A.), the prevalence rates of cervical dysplasia range from 2.3-6.6%^[6] in Middle East 1.65-7.9%^[7-9], in Israel 0.98 to 4.41%^[10-12] and in India 1.392-7.8%^[13-16], whereas in our study it was 11.5%.

In our study, prevalence of LSIL was more common in premenopausal age group near 40 years. It was noticed that in the majority of studies including ours, prevalence of HSIL was higher in postmenopausal women in our study.

CONCLUSIONS

Inflammatory and epithelial abnormalities of Cervix are high in our setup, and conventional Pap smear is a good tool to screen various cervical lesions. The prevalence of epithelial abnormalities (EAC), as our study shows, is directly proportional to the age. This may be a tip of iceberg as more awareness is needed in females especially from rural areas to undergo screening routinely in Vindhya Region. Periodical cytological screening would go a long way in the early detection of various cervical lesions and help in reducing the incidence of cervical cancer

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