



STUDY OF CERVICAL SMEARS IN WOMEN ATTENDING GYNAECOLOGY OUT PATIENT CLINIC

Gynaecology

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ABSTRACT

Introduction- Cervical cancer is the commonest genital tract cancer in India. Cervical smear has reduced the incidence of cervical cancer by nearly 80 percent. The age standardized incidence of cancer cervix in India range from 30 to 40 cases per 100,000 women. **Material and Methods-** Present study was an observational study of cervical smears performed in women who attended Gynaecology out patient clinic. **Results-** Ninety six percent smears were negative for neoplastic changes. Atypical squamous cells of underterminat significance (ASCUS) were seen in 1.58 %, where as Low grade (LSIL) and high grade (HSIL) squamous intraepithelial lesions were seen in 0.59% and 1.18% women respectively. Adenocarcinoma cervix was diagnosed in 0.19 % women. **Conclusion-** Cervical smear is simple and cost effective method of detecting cervical epithelial abnormalities. It should be carried out in all women coming to Gynaecology, irrespective of their complaints. It is for early detection of cancer cervix.

KEYWORDS

Cervical smear, Papanicolaou smear, Cervical cytology, Carcinoma cervix

INTRODUCTION-

Cervical cancer continues to be the most common genital tract cancer in Indian subcontinent.¹ Many studies have shown that more than a million new cases of cervical cancer occur every year.^{2,3} Unlike most other malignancies, cervix cancer is easily detected and readily preventable disease. Cervical cancers in their early stage of development is completely and easily treatable.⁴

The Papanicolaou (Pap) smear was introduced in 1941, which became the standard screening test for cervical cancer and premalignant lesions, and is being used globally.^{5,6} Many studies in the literature showed that there is a reduction in the incidence and mortality due to invasive cervical cancer worldwide because of early detection and screening; this is possible because the Pap test detects early cervical epithelial cell abnormalities and mild-to-severe dysplasia to invasive cancer and facilitates early diagnosis.⁷⁻⁹ This test not only plays a crucial role in the detection of cervical cancer and its precursor lesions but also aids in the diagnosis of other conditions as well such as infective and inflammatory conditions. The aim of this study was to evaluate the role of Pap smear in detecting cytological abnormalities in cervical epithelium, which were suggestive of premalignant and malignant lesions.

MATERIAL AND METHODS-

The study was conducted in the Department of Obstetrics and Gynaecology at Rural Medical College Loni, Maharashtra, over seventeen months period with effect from 1st January 2019 to 30th May 2020. A total of 505 women attending Gynaecology OPD and who had cervical smear examination were included. Inclusion criteria were as follows: Women with age more than 18 years, women with vaginal discharge, post coital bleeding, inter-menstrual bleeding, post-menopausal bleeding, unhealthy looking cervix, lesion that bleeds on touch, and women without any symptoms were screened. Women who were known cases of cancer cervix or treated cases of cancer cervix and women who were pregnant were excluded from study. All women in study were educated about the importance of screening method to detect carcinoma of cervix in preclinical stage, the nature of the test and the possible need for follow-up in case of an abnormal cervical smear test result. Cervical smears were taken with the conventional method according to standard technique as per medical literature.

Results-

Vaginal discharge was the commonest symptom (77%) in women who attended gynaecological OPD and undergone cervical smear examination. Itching over vulva (33%), irregular menses (23%) and per-vaginal spotting or bleeding were other common presenting symptoms. Pain in lower abdomen (19%) and post menopausal bleeding (4%) were complaints by other women. (Table 1)

Study revealed that 99% of the smears were satisfactory for evaluation and opinion. It was observed that cervical cytology report in 96%

women were negative for intra-epithelial lesion or malignancy (NILM). Cytology report revealed atypical squamous cells of underterminat significance (ASCUS) in 1.58 % women. Low grade (LSIL) and high grade (HSIL) squamous intraepithelial lesions were seen in 0.59% and 1.18% women respectively. Cytological feature of Adenocarcinoma cervix were seen in 0.19 % women. It was observed that cytological abnormalities suggestive of premalignant conditions increased with age of the women. (Table 2)

Out of 505 cervical smears examined, 345 smears (68%) showed cytological features of inflammation. Among the smears showing inflammatory changes, 71% showed reactive cellular changes, 23% showed trichomoniasis, candidiasis and bacterial vaginosis. In 6 percent smears, there were changes of epithelial atrophy. Specific inflammatory changes were predominantly seen among young women below 30 years of age and atrophic changes were predominantly seen among women in postmenopausal age group. (Table 3)

It was observed that, out of 78 cases with specific inflammatory changes, 30 smears (39%) had evidence of fungal infection like candida species, where as 26 smears (33%) had evidence of bacterial vaginosis and 22 smears (28%) had evidence of infection by trichomonal species. (Table 4)

DISCUSSION-

In women, cervical cancer is the commonest and preventable genital cancer in developing countries. In India, the burden of cervical cancer is much more than one million cases.¹ According to the report published by the World Health Organization (WHO), 80% of deaths from cervical cancer were from developing countries because of lack of screening facilities and poor awareness among women. By organizing screening programs in developing country by government/authority, the incidence of cervix cancer can be reduced. More so, it can be detected much earlier and treated as well. Once cancer metastasizes to other parts of the body, the disease becomes more difficult to treat and increases morbidity and mortality.

The Papanicolaou smear was introduced in 1941, became the standard screening test for cervical cancer and premalignant lesions, and is being used globally.^{5,6} Many studies in the literature showed that there is a reduction in the incidence and mortality due to invasive cervical cancer worldwide because of early detection and screening; this is possible because the Pap test detects early cervical epithelial cell abnormalities and mild-to-severe dysplasia to invasive cancer and facilitates early diagnosis.⁷⁻⁹ This test not only plays a crucial role in the detection of cervical cancer and its precursor lesions but also aids in the diagnosis of other conditions as well such as infective and inflammatory conditions.

Being simple, effective, and versatile, the Pap smear should be an integral part of routine clinical examination and large population at

risk can be screened. Pap smear screening has sensitivity of 50%–75% and specificity of 98%–99%.¹⁰

In the present study, out of 505 cervical smears examined, 483(96%) revealed no intraepithelial lesion or malignancy(NILM), 22(6%) had features suggestive of atrophy, 18(4%) showed abnormal cytology suggestive of neoplasia. Out of total 505 smears, 323 smears (68%) showed reactive inflammatory changes. In the cervical smears revealed many associated cervico-vaginal infections. Of the 78 positive smears for micro organisms, 26 (33%) had bacterial vaginosis, 22 (28%) had trichomonas vaginalis, 30 (38%) had candida species. In the present study the incidence of ASCUS was only 1.6 percent, which was much less than reported by other researchers. The results of the present study co inside with the observations of other research workers. 11-15(Table 5)

CONCLUSION-

Cervical smear examination was useful in detecting cervical epithelial abnormalities .It was observed that four percent smears showed cytological abnormalities suggestive of either premalignant or malignant conditions. The cytological abnormalities were more prevalent in women above 40 years of age .Cervical smear examination revealed very high percentage of cases with cervico vaginal specific and non specific infections, like trichomoniasis, moniliasis and bacterial vaginosis. Thus, it is recommended that ,cervical cytology should be carried out in all women coming to Gynaecology outpatient department, irrespective of their complaints.

TABLES

TABLE-1 DISTRIBUTION OF WOMEN AS PER PRESENTING SYMPTOMS

SR. NO	Main presenting symptom	No. of cases (no=505)	%
1	Vaginal discharge	390	77.22
2	Itching over vulva	167	33.06
3	Irregular menses	115	22.77
4	Per vaginal spotting/bleeding	112	22.17
5	Pain lower abdomen	97	19.20
6	Post menopausal bleeding	22	04.35

TABLE-2 CYTOLOGY FINDINGS IN RELATION TO AGE GROUP

SR. NO	Cytology findings	Age Group in years				Total (N=505)
		21-30	31-40	41-50	Above 50	
1	Unsatisfactory smear	0	01	0	03	04(00.79%)
2	NILM	146	177	123	37	483(95.64%)
5	ASCUS	0	01	02	05	08(01.58%)
6	LSIL	0	0	0	03	03(00.59%)
7	HSIL	01	02	01	02	06(01.18%)
8	SCC / Adeno-carcinoma	0	0	0	01	01(00.19%)
	Total	147	181	126	51	505

TABLE-3 DISTRIBUTION OF INFLAMMATORY AND ATROPHIC SMEARS IN RELATION TO AGE GROUP

SR. NO	Cytology findings	Age Group (Years)				Total (N=345)
		21-30	31-40	41-50	Above 50	
1	Reactive cellular changes	65 (26.53%)	93 (37.95%)	73 (29.79%)	14 (5.71%)	245 (71.01%)
2	Specific inflammatory changes	38 (48.71%)	22 (28.20%)	18 (23.07%)	00 (00.00%)	78 (22.60%)
3	Atrophic changes	00(00.00%)	00 (00.00%)	05 (22.72)	17 (77.27%)	22 (06.37%)

TABLE-4 ASSOCIATED SPECIFIC LOWER GENITAL TRACT INFECTIONS AS DETECTED IN CERVICAL SMEAR

Sr. No	Specific causative micro organism	No. of cases (n=78)	Percentage
1	Candidiasis	30	38.46
2	Bacterial Vaginosis	26	33.33
3	Trichomoniasis	22	28.20

TABLE 5-COMPARISON OF CERVICAL EPITHELIAL CELL ABNORMALITIES DETECTED IN PRESENT STUDY AND OTHER STUDIES

Author	Total smears	TYPE OF CERVICAL EPITHELIAL ABNORMALITY			
		ASCUS	LSIL	HSIL	SCC
George and Rao ¹¹	1000	0.3%	2.0%	0.9%	0.3%
Sherwani R ¹²	242	1.32%	3.53%	3.53%	3.53%
Gupta ¹³	4703	0.52%	1.36%	0.91%	0.28%
Nayani and Hendre ¹⁴	104	1.7%	0.5%	0.10%	-
Sayani ¹⁵	1032	1.18%	0.39%	1.0%	0.02%
Present study*	505	1.58%	0.59%	1.18%	0.19%

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