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RETROSPECTIVE STUDY OF CERVICAL SMEAR SCREENING FOR DETECTION OF PATHOLOGICAL LESIONS AMONG PATIENTS ATTENDING GYNAECOLOGY OPD

Community Medicine

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ABSTRACT

Objectives: To study the outcome of screening of cervical smears of women attending the Gynaecology OPD for detection of various pathological lesions of Uterine Cervix.

Study Setting: Dept. of Obstetrics and Gynaecology at a Tertiary Care Hospital, Mumbai

Study Design: Hospital based retrospective study

Methodology: The retrospective study was conducted by using records of Gynaecology OPD patients attending Tertiary Care Institute for screening of cervical smears(N=200). Personal information like age, religion, marital status, parity was noted. Detailed medical history, drug history and complaints were also recorded. The outcome of cytopathological examination, as per "The Bethesda System" was studied. The smears were classified as normal, negative for intraepithelial lesion and epithelial cell abnormalities.

Results: Total 200 patients were sent for cytopathological examination for screening of cervical cancer (N=200). The most common age group of patients was 31-40 Years. Most of them were Hindu (90%), belonged to lower socioeconomic status (70%) and multipara (92%). The commonest complain recorded was PV discharge (31%). The outcome of cervical smear examination showed Inflammation (46%), normal smear (16%), and other findings. The cytopathological findings suggestive of Carcinoma cervix was seen in 2 patients.

Conclusions and Recommendations: Cancer cervix can be prevented as it has a long pre-invasive state. In India, most of these cases come to the attention of doctors at an advanced stage when hardly any curative management is possible. Hence, screening programs (including cytology examination) plays a major role in prevention of cervical cancer.

KEYWORDS:

Cancer cervix, cervical smear, PAP smear, cytopathological examination

Introduction

Cervical cancer is one of the leading cause of death amongst women. Every year about 14 million new cancer cases are detected and 8 million people die of cancer.[1] Approximately 80% of which occur in the developing world.[2] India alone accounts for one-quarter of the worldwide burden of cervical cancers.[3]

In India, cervical cancer is the leading malignancy among women, and every year there are about 90 000 new cases.4 In India, the three most common fatal cancers reported in women at 30–69 years of age were cervical, stomach, and breast.[5]

Cervical cancer is responsible for 25.9% of all cancer cases and 23.3% of all cancer deaths among Indian women. The age-standardized incidence rate and age-standardized mortality rate of cervical cancers are 27.0 and 15.2, respectively, among Indian women.[6]

Infection with Human Papilloma Virus is one of the major cause of cervical cancer. Persistent infection with high-risk types of HPV is the necessary but not sufficient cause of cervical cancer.7Around 70% of cervical cancers are caused by infection with HPV 16 or HPV 18. More than 100 types of HPV have been identified, of which 40 infect the genital tract.[8]

Over the last two decades, the urbanization and increasing modern ization of India has transformed education, lifestyle, health-care access and longevity, and has contributed to an increased risk profile for chronic diseases such as cancer.9

Cancer cervix can be prevented as it has a long pre-invasive state and with availability of screening programs and treatment facilities, the mortality due to cervical cancer may reduce in future. In India, most of these cases come to the attention of doctors at an advanced stage when hardly any curative management is possible. Hence, the role of screening programs (including cytology examination) in prevention of cervical cancer is substantial. Although, in developing countries due to lack of trained manpower and other reasons, mass screening program for cervical cancer is still not possible.

Material and Methods

It was a Hospital based Retrospective Observational study of 200 women attending OPD services of department of Obstetrics and Gynecology (N=200) and referred for cancer cervix screening by cytopathological examination. Personal information like age, religion, marital status, parity was noted. Detailed medical history, drug history and complaints were also recorded. Cervical smears were collected from two sites viz. squamocolumnar junction of cervix and the endocervical canal. The sampling was performed on days 12 to 16 of menstrual cycle. The smears were then immediately fixed with spray fixative and sent for further processing. Papincolaou stain was used to stain the cervical smears. Cytopathological examination was done according to "The Besthesda System"10 with following features: (a) adequacy of the specimen and, (b) General categorization of the smears as Normal, Negative for intraepithelial lesion (Inflammatory, reparative, atrophy, organism and infection) and epithelial cell abnormalities (ASCUS, LSIL, HSIL, AGUS, and carcinoma cervix)

Results Table 1

Age of the woman	No	%
< 20 Years	3	1.5%
21 to 30 Years	43	21.5%
31 to 40 Years	68	34%
41 to 50 Years	54	27%
51 to 60 Years	24	12%
> 60 Years	8	4%
Religion	**No**	**%**
Hindu	180	90%
Muslim	13	6.5%
Christian	7	3.5%

Marital Status	No	%
Married	197	98.5%
Unmarried	3	1.5%
Socioeconomic Status	**No**	**%**
Lower	140	70%
Upper, middle	60	30%

In the present study, the most common age group was 31 to 40 years (34%), followed by 41 to 50 years (27%). Most of the women were Hindu (90%), married (98.5%) and belonged to lower socioeconomic status (70%).

Table 2

Chief Complaints	No	%
PV Discharge	62	31%
Routine Screening	56	28%
Pain	31	15.5%
Other	51	25.5%

The chief complain for attending the OPD services was PV discharge (31%). Routine screening was also important reason (28%) for attending the OPD services. Pain was another important symptom, seen in 15.5% of total women.

Table 3

Results of cervical smear screening	No	%
Inflammatory	92	46%
Normal	32	16%
Reparative	14	7%
Atrophic	11	5.5%
Candidiasis	8	4%
LSIL (Low grade Squamous Intraepithelial lesion)	7	3.5%
Bacterial Vaginosis	7	3.5%
ASCUS (Atypical Squamous cell of Undetermined Significance)	6	3%
TrichomonasVaginalis	5	2.5%
HSIL (High grade Squamous Intraepithelial lesion)	2	1%
AGUS (Atypical Glandular cell of Undetermined Significance)	2	1%
Suggestive of Cancer cervix	2	1%
Inadequate	12	6%

Analysis of cervical smear screening showed Inflammatory (46%) was the commonest finding, followed by Normal, Reparative and Atrophic, etc. Cytopathological finding suggestive of Cancer cervix was seen in 2 patients.

Discussion

Cancer of the cervix is a major cause of morbidity and mortality in women living in developing countries. The data from the National Cancer Registry Program (NCRP) in India indicates that the most common sites of cancer among womenare the breasts and the cervix.[11]

The aim of cervical cancer screening method is to diagnose the disease in its earliest stage i.e. premalignant stage, and to reduce mortality due to invasive cancer. Pap smear screening for cervical cancer and precancerous conditions has been proved to be very effective in cervical cancer prevention and in reducing mortality.[12]It is reliable and inexpensive.[13]

The present study was undertaken to find out the spectrum of various lesions of the uterine cervix, in tertiary care hospital. In the present study, total 200 cervical smears were studied to determine the cytopathological findings.

In the present study, the most common age group was 31 to 40 years (34%), followed by 41 to 50 years (27%). Most of the women were Hindu (90%), married (98.5%) and belonged to lower socioeconomic status (70%).

Other studies reported that higher education and socioeconomic status are associated with lower cervical cancer rates in India.[14] The role of older age at marriage, fewer partners and pregnancies over time and through higher uptake of screening services was also documented.[15] Few studies16 highlighted the role of targeted cervical cancer screening and treatment interventions in rural areas to have a greater impact among women who are married, more highly educated and nulliparous. Early age at first marriage, longer duration of married life, increased and early parity, low educational status and poor genital hygiene were found to have played significant role in the subsequent development of carcinoma cervix.[17]

In the present study, analysis of cervical smear screening showed Inflammatory (46%) was the commonest finding, followed by Normal, Reparative and Atrophic, etc.

Similarly, a study done in Jordan18 showed that the smears collected from 1176 women aged 18-70 years, 79.9% showed non-specific inflammation, 4.5% were classified as inadequate, 7.7% were normal.Reactive cellular changes of inflammation or nonspecific inflammation were reported in 55-60% smear samples by other authors[13,19]also.

A study done in India[20] on patients complaining of leucorrhoea reported, 348 (69.6 %) cases showed reactive cellular changes associated with repair (Inflammatory smear), 56 (11.2%) cases were due to various infectious agents, atypical squamous cells of undetermined significance (ASCUS) 4 cases (0.8%), Atypical glandular hyperplasia 4 cases (0.8%),Suspicious of malignancy 9 cases (1.8%)

Conclusion

Cancer cervix can be prevented as it has a long pre-invasive state. In India, most of these cases come to the attention of doctors at an advanced stage when hardly any curative management is possible. Hence, screening programs (including cytology examination) plays a major role in prevention of cervical cancer.

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