ORIGINAL ARTICLE

PAP SMEAR, AN IMPORTANT SCREENING TOOL TO DETECT PRECANCEROUS STAGE OF CARCINOMA OF CERVIX

Gulfareen Haider, Zahida Parveen, Farhana Anjum, Aftab Munir

Department of Obstetrics and Gynaecology, Isra University Hospital, Hyderabad Sind, Pakistan

Background: Many women can be saved from carcinoma of cervix by detecting and treating its precancerous stage. Pap smear is cheap and easily available in majority of institutes. The objective of this study is to determine the frequency of abnormal Pap smear and role of Pap smear in detecting precancerous stage of cancer cervix in women. **Methods:** This is retrospective descriptive study was conducted in gynaecology outpatient department of Isra University Hospital, Hyderabad, Sind from Nov 2006 to Oct 2009. All women who presented in OPD with gynaecological complaints were included in the study. Pregnant women were excluded from the study. Smear was collected with an Aryes spatula and relevant information was obtained from the patient's record and recorded on pre-designed Performa. Slides were then sent to pathology department. Data were analysed through SPSS-15 and presented as frequency and percentage. **Results:** Total 981 women underwent Pap smear screening. Majority (63.3%) of the patients belonged to age group of 31–40 years. One hundred and eighty (18.34%) smears were normal and 792 (80.7%) were abnormal. Among these abnormal smears, 739 (75.33%) smears were inflammatory while 4 (0.40%) women had Ca *in situ* and 4 (0.40%) had squamous cell carcinoma. **Conclusion.** Pap smear is an important screening tool to detect precancerous stage of carcinoma of cervix. It should be done periodically in all married and high risk women for early detection of a precancerous stage.

Keywords: Pap smear, inflammatory, cancer cervix, malignancy, gynaecological tumour, diagnosis

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INTRODUCTION

Globally carcinoma (Ca.) of cervix is second most common cancer in women after breast carcinoma.[1] In Pakistan, hospital based data shows that Ca. cervix is third most common cancer after breast and oral cancer.[2] It can be prevented by screening every woman by Pap smear which is effective, cheap and easy to perform. However, this screening service is not always feasible in developing countries because cytology facilities are largely unavailable and are often costly at private hospitals.[3,4]

Most common risk factors of Ca. cervix are young age at first intercourse, multiple sexual partners, low socio-economic status and human papilloma infection. Incidence of Ca. cervix varies from country to country and is more frequent in the developing/under developed countries where literacy and socioeconomic status is low, hygiene is poor and women marry at young age.[5] The value of cytological screening for cervical cancer has been found effective in countries where disease is more common.[6]

The objective of this study was to determine the frequency of abnormal Pap smear and role of Pap smear in detecting precancerous stage of Ca. cervix in women attending Gynaecology Outpatient Department.

MATERIAL AND METHODS

This descriptive study was conducted in Gynaecology Outpatient Department of Isra University Hospital, Hyderabad, Sind over a period of 3 years from Nov 2006 to Oct 2009. All women who presented in OPD with gynaecological complaints were included in the study while pregnant women were excluded.

Smear was collected using an Aryes spatula after exposing the cervix by a Cusco speculum. The samples collected were transferred to glass slide and then slides were fixed with 95% ethyl alcohol. Relevant information was obtained from the patients' record and recorded on a pre-designed Performa. Slides were then sent to pathology department. A cyto-technologist stained the slides with papanicolaou stain. Each slide was then examined by a cyto-pathologist.

Data were analysed using SPSS-15. Results were tabulated as frequency and percentages.

RESULTS

Total 981 women underwent Pap smear screening. Majority (621, 63.3%) of the patients, were in age group of 31–40 years. Three hundred and twenty-two (32.8%) women were married for 5–10 years while 637 (64.93%) women were married for more than 10 years. Majority (684, 69.72%) of women belonged to poor socioeconomic condition (Table-1).

Results of Pap smear showed that 180 (18.34%) smears were normal while 792 (80.7%) smears were abnormal. Among these abnormal smears, 739 (75.33%) smears were inflammatory while 4 (0.40%) women have Ca in situ and 4 (0.40%) have squamous cell carcinoma (Table-2).

Table-1: Socio-demographic data (n=981)

Variables	Frequency	Percentage
Age		
<20	115	11.72
20–30	245	24.97
31–40	621	63.3
Socioeconomic condition		
Poor	684	69.72
Middle	175	17.83
Upper	122	12.43
Married since		
<5 years	22	2.24
5–10 years	322	32.8
>10 years	637	64.93

Table-2: Results of Pap smear (n=981)

Results of pap smear	Number	Percentage
Normal	180	18.34
Inflammatory	739	75.33
Dysplasia 1 & 2	21	2.14
CIN3	11	1.12
Ca *in situ*	4	0.40
Squamous cell carcinoma	4	0.40
Inadequate specimen	22	2.24

DISCUSSION

Ca. cervix is one of the commonest gynaecological malignancies and can be prevented by routine screening of cervix by Pap smear. By identifying and treating its precancerous stage we can save the lives of many women. Pap smear screening is the best screening programme worldwide recommended for sexually active women.[7,8]

Results of our study showed that 18.34% had normal smear while 75.33% had inflammatory smear. In comparison to this, a study done in Karachi[9] reported 30.55% normal smear and 60.44% inflammatory smears. Another study conducted by Khan *et al*[10] showed that 22.7% women had normal smear while 55.3% had inflammatory smear.

In our study, 2.14% had dysplasia 1 and 2 while 1.12% had CIN3. Khan *et al*[10] reported that 3.12% women had dysplastic smear. Ahmed *et al*[11] noted that 2.47% women had mild dyskaryosis. According to American cancer society guideline for the early detection of cervical neoplasia and cancer, the screening should be started approximately 3 years after the onset of sexual intercourse but not later than age 21 years.[7,12]

In our study, Ca. *in situ* was seen in 0.40% women while in a study conducted by Khattak *et al*[13] Ca. *in situ* was seen in 0.3% women. In another study by Khan *et al*[10], Ca. *in situ* was seen in 2.02% women.

Pap smear is traditionally obtained using spatula for ecto-cervix and cotton swab for endo-cervix.[14] Sometimes the collection of endo-cervical cells may become inadequate using a spatula using a combination of endo-cervical brush with spatula. In our study, inadequate sampling was present in 2.24% women. Sohail R *et al*[15] reported that 2% patients in their study had inadequate smear for cytological examination.

It has been concluded in various studies that Pap smear is widely accepted screening technique for detection of abnormalities of cervix.[16,17]

CONCLUSION

Pap smear examination is an important screening tool to detect precancerous stage of carcinoma of cervix. It should be routinely done in all married and high risk women for timely detection of malignancy.

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Address for Correspondence:

Dr. Gulfareen Haider, 530-A, Block-C, Unit-8. Latifabad, Hyderabad, Sind, Pakistan. **Cell:** +92-300-9379794
Email: gfareen@yahoo.com