

A Clinical Audit of Pap Smear Test for Screening of Cervical Cancer from Private Teaching Hospital of Pakistan

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ABSTRACT

Background: Cervical cancer is the fourth common malignancy in female world wise. The cervical cancer is the only cancer that have a definitive precancerous lesion and using Pap smear can be detected easily. WHO Has come up with “global strategy to eliminate cervical cancer” has emphasized pap smear widely as screening test. **Objective:** The study was conducted to audit pap smear test done in our department during the last one year. **Study Design:** This was a cross-sectional study. **Settings:** University of Lahore teaching hospital (ULTH), an affiliated hospital of private sector medical college, Lahore Pakistan. **Duration:** From February 2020 to February 2021. **Methods:** Clinical audit of all pap smear done from February 2020 to February 2021. A specialized proforma recording patient profile, clinical symptoms, examination finding, cytological report and follow up of patients with abnormal report. Conventional method of pap smear with Ayers’ spatula and slide was used. Data analysis was done using SPSS version 21. **Results:** Out of 357 Gynae patients, 120 patients had pap smear. Majority of patients 43% aged 40-50 years. The cervix was normal in 70% patients, hypertrophied in 28% and bleed to touch in 2% of the patients. Cytology showed normal smear in 55% patients, inflammation was in 37% and Cervical intraepithelial neoplasia (CIN) was seen in 5%. One patients’ report turned out as squamous cell carcinoma and 2 samples were reported inadequate. **Conclusion:** Pap smear is simple screening test for carcinoma cervix but it is underused in our setup. There is need of mass campaign to familiarize the population with screening strategy and it should be offered free of cost to all.

Keywords: PAP Smear, HPV Vaccination. Cervical cancer, HPV testing.

INTRODUCTION

Cervical cancer is the fourth common malignancy in female throughout the world.¹ However burden of disease has limited to less developed regions like South Asia and Eastern Africa,² where Cervical cancer is significant cause of mortality due to late presentation. Human papilloma virus (HPV) infection is major risk factor,² for development of cervical malignancy. Almost 70% of cervical carcinoma worldwide are related to high oncogenic risk (HR)-HPV genotypes 16 and 18.⁴ HPV vaccination has reduced the risk of invasive cervical carcinoma.⁵ Human papillomavirus (HPV) infection is

also reported in Pakistani women with pre malignant conditions of cervix,⁶ other factors include smoking in any form tobacco including cigarettes, cigars, pipes, hookah and shisha , high parity, continuous use of oral hormonal contraceptives, Multiple sex partners.⁷ Pap (Papanicolaou) smear is a simple noninvasive screening tool for detection of precancerous and cancerous lesions.⁸ The cervical cancer is only cancer that have a definitive precancerous lesion and using Pap smear can be detected easily. Only by implementing global cervical cancer screening systems that ensure early and accurate diagnosis and management of precancerous lesions will

significant reductions in cervical cancer be attained.⁹ The burden of disease and its severity in Pakistan are mainly unknown.¹⁰ The available resources are insufficient to combat this disease. There is a scarcity of information regarding this cancer in regional centers.¹⁰ The success of Pap smear screening in developed world is based on its use as universal screening and acceptance by population. We can achieve the same success with routine screening of our population with pap smear. This study was done to audit the reports of pap smear, offered as a part of routine cervical screening program of our department.

METHODS

This study was conducted in University of Lahore teaching hospital (ULTH), one of the 1 affiliated hospitals with university college of medicine, a private sector medical college. This is 500 bedded tertiary care setups, and Gynae department is dealing with all sort of emergency and elective oncological procedures. The hospital provides consultant led private care, semiprivate or ward care and then zakat fund supported free care to patients. There was offer universal cervical screening to all the patient attending our outpatient department. A clinical audit of Pap smear done. All cases of Pap smear obtained from Feb 2020 to Feb 2021 were included. Specialized proforma was made and data was gathered regarding patient profile, Parity, presenting complaint, finding of visual inspection with Cusco's speculum, cytology report of pap smear and sample adequacy was noted. Pap smear were performed with conventional method. Ayer's spatula was used to obtain cell from squamo-columnar junction and two slides were made, fixed with alcohol spray. SPSS version 21 was used for data analysis.

RESULTS

During the study period total 357 patient were examined in Gynae outdoor and out of them 120 patients underwent pap smear. Most of the cases 43.3% were seen with age group of 41-50 years, followed 27.5% were between age group of 31-40 years, 16.7% were in age group of 20 -30 years and 12.5% were aged >50 years. Most of cases 70.0% cervix was normal looking on speculum examination, 28.0% patient's cervix were hypertrophied and 2.0% cervix were hyperendemic/bleed to touch. Table 1

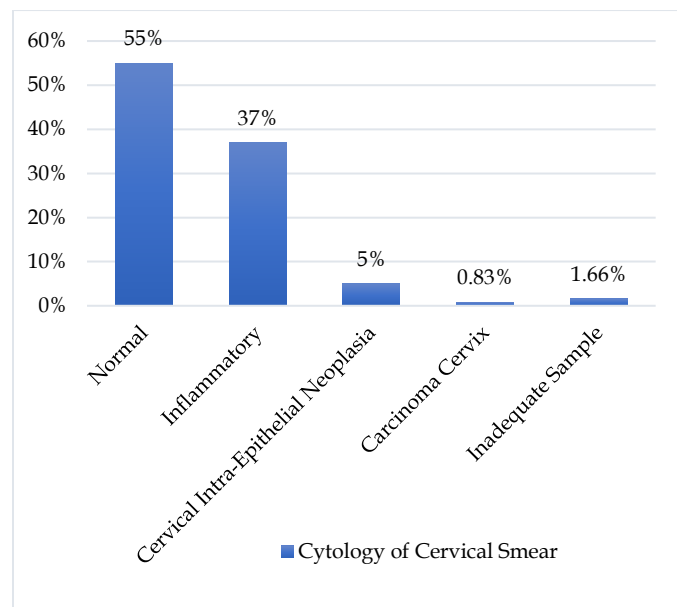
There were 6(5%) cases of CIN, one case of High grade squamous intraepithelial lesion (HSIL) and rest were Low grade squamous intraepithelial lesion (LSIL). If we analyze, cases of abnormal smear, one patient who had LSIL was 39-year-old while others were more than 40 years of age. The chief complaint was history of post coital bleeding in all cases; however, cervix was normal

looking on examination. All cases were confirmed with cervical biopsy and all opted for hysterectomy as treatment. One patient who had cervical carcinoma was 50-year-old, had a hyperemic / bleed to touch cervix on examination. Her Diagnosis was confirmed on cervical biopsy and had abdominal hysterectomy afterward.

Table 1: Descriptive statistics of age and speculums examination findings n=120

| Variables | | Frequency | Percent |
|---------------------------------|-------------------------------|-----------|---------|
| Age groups | 20 to 30 years | 20 | 16.7% |
| | 31 to 40 years | 33 | 27.5% |
| | 41 to 50 years | 52 | 43.3% |
| | > 50 years | 15 | 12.5% |
| | Total | 120 | 100.0% |
| Finding on speculum examination | Normal | 84 | 70.0% |
| | Hypertrophied | 33 | 28.0% |
| | Hyperendemic / bleed to touch | 03 | 02.0% |
| | Growth on cervix | 00 | 00 |
| | Total | 120 | 100.0 |

Figure 1: The cytology of performed pap smear



DISCUSSION

The incidence of cervical cancer is four times higher in low- or middle-income groups as compared to developed countries.⁷ The incidence of cervical cancer is high in Pakistan and most of the patients presents in advanced stage. The prevention programs like Pap smear screening are available in most of centers but not free of cost. The

awareness and acceptance as to go for preventive strategies is very low. In this study majority of patients were between 40 to 50 years of age. Similarly, Digumarti L *et al*¹¹ in their audit report on Pap Smears, reported that the most of the females (34%) were found between the age group of 41-50 years. On other hand Tamrakar SR *et al*¹² reported that the average age of women was 37.57 ± 10.72 years and majority of them were seen with age of 30 – 34 years. Consistently Haran M *et al*¹³ demonstrated in their audit report that the most of the women 43% were presented with age group of 35 to 44 years.

In this study two third patient grossly, the cervix was normal looking and only 3% cases had cervix that bleeds to touch. However, the report was abnormal for all these cases. This emphasize the role of visual inspection of cervix, which should be included in all low resource setting. There are promising results if we combine visual inspection with acetic acid application (VIA)¹⁴ or combine VIA with pap smear.¹⁵ In this study majority of sample were reported adequate except 2(1.66%) while Digumarti, L *et al*¹¹ reported 100% sample adequacy and study by tamrakar 3.6% sample were inadequate.¹² In this study the inflammation was present in 37% of smear, Sachin *et al* from India reported 42.6% inflammatory smear. Cervical intraepithelial neoplasia was present in 5% cases. Sachin *et al* reported almost similar incidence. We were able to detect one case of frank carcinoma with this screening test. All these cases of premalignant and malignant diagnosis were confirmed by cervical biopsy and results were same. Good correlation of pap smear cytology and cervical biopsy was reported by study in Nepal.¹⁶ We need a mass campaign about awareness of pap smear testing, even health care professionals are reluctant for pap smear screening. A pilot study from our country reported Only 25% of doctors have a pap smear once in their life.¹⁷ According to our report usually pap smear reporting cost effective for cytological examination and majority of our patient even cannot pay this amount of money and other reported barriers are the inadequate knowledge, shyness fear, embarrassment and cultural belief.¹⁷⁻¹⁹ As majority of cases are caused by HPV, Unfortunately its also available with cost , mostly in private sector .Initiatives should be taken to offer this test free of cost .There is evidence that self-sampling for HPV can cause satisfactory sampling and acceptance by females in low income setting.²⁰ In these rural contexts, a systematic strategy to interpolating missing data through predicting distributions should be adopted; nevertheless, when large-scale data have been collected in the form of an audit, such an approach can be challenging.²⁰ The WHO recommends that in developing countries, women aged 18-69 years should be screened for cervical cancer every 3 years. There was several limitations in this study as this was a single center study and was done during

COVID19 pandemic, no of patient who had pap smear could be more otherwise.

CONCLUSION

Pap smear is effective screening test for carcinoma of cervix. The acceptance of test as routine screening is very low in our setup. Need of visit to hospital and cost for cytological examination can be potential factor. To achieve WHO vision 2030 target we need a mass education in both public and private centers.

LIMITATIONS

This was a single center study. The study was conducted during COVID19 pandemic, no of patient who had pap smear could be more otherwise.

SUGGESTIONS / RECOMMENDATIONS

Multicenter large-scale studies are recommended on this subject.

CONFLICT OF INTEREST / DISCLOSURE

No conflict of interest is involved.

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