

Cervical Cancer Screening: A Cross-Sectional Study Conducted in Tertiary Care Center in Indore

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Abstract

Background: Cervical cancer is a potentially preventable disease if appropriate screening and prophylactic strategies are employed. Low awareness of cervical cancer, in combination with low health care seeking behavior, is a key challenge for cervical cancer prevention. Adequate knowledge play a huge role in influencing the beliefs and practices of the general public in a positive way. We assessed the knowledge, attitudes, and practices of cervical cancer and screening amongst female came to our patient department of MTH hospital Indore.

Methods: We conducted a facility-based cross-sectional study on females from February 2020- October 2022 between 21 and 49 years of age. Data were collected and analysis was done using descriptive statistics.

Results: A total of 12994 women screened, about 503 are VIA positive out of which 339 are true positive and 164 are false positive, All VIA positive women consider for colposcopy.

Conclusion: This study revealed that knowledge about cervical cancer was generally low, in particular for health care seeking behavior and treatment of cervical cancer. Health awareness programs should be strengthened at both community and health facility levels with emphasis highlighting the causes, risk factors, care seeking behaviors, and treatment options for cervical cancer.

Keywords: VIA, HPV.

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Introduction

In 2008, one in every six cancers worldwide was caused by an infection that could be prevented or treated [1]. Human papillomavirus (HPV) is responsible for 99% of cervical cancer and accounts for approximately half of the infection-related burden of cancer in women [1, 2]. In 2012, about 85% of the global burden of cervical cancer was reported from developing countries with Sub-Saharan Africa as the region with the highest incidence of cervical cancer in the world [2–4].

In India, cancer of the cervix is the 3rd most common cancer with an Incidence rate of

18.3% (123,907 cases) and the second leading cause of death with a mortality rate of 9.1% as per GLOBOCAN 2020. These figures most likely underestimate the actual number of cases given the low level of awareness for cervical cancer, limited access to cervical cancer screening and treatment services. Access to cervical cancer screening was extremely limited for the majority of women. Visual Inspection of the cervix with Acetic acid wash (VIA) and offered immediate treatment of precancerous cervical lesions with cryotherapy [5]. Women infected with HIV are at higher risk for precancerous lesions

and are more likely to progress to invasive cervical cancer compared with uninfected women [6-8]. This study was designed to assess the level of knowledge and awareness of cervical cancer among HIV-infected women.

2) Material and methods

Source of Data: All female patients (12994 approximately) attending the Gynaecology OPD of MYH and MTH Hospital, Indore and qualified the inclusion criteria were enrolled for the study.

Inclusion Criteria

- Women of age group of 30 to 65 years with following symptoms: Abnormal vaginal discharge, lower abdominal pain, irregular menstrual bleeding, postmenopausal bleeding, postcoital bleeding, prolapse and burning micturition.
- Women with unhealthy looking cervix.
- Women between 30 to 65 years of age willing for screening of cervical cancer.

Exclusion Criteria

- Women with frank cancer cervix /already diagnosed cases of cancer cervix.
- Patient with bleeding p/v, active infection at the time of examination.
- Pregnant women.
- Post total hysterectomy patients.
- Patient not willing for the procedure

Each patient visiting the gynaecology OPD and falling under inclusion criteria was evaluated. Written and informed consent was taken from all the patients after a brief explanation of the procedure.

A careful history including demographic data like age, religion, socioeconomic

status, education, parity, duration of marriage, history of contraception of the patient, Obstetric and Gynaecological history was taken. General and systemic examination was done and all the data was recorded on a pre written proforma.

Naked eye examination was done after exposing the cervix with bivalved cusco speculum. (No P/V examinations to be done 12-24 hours before this examination)

PAP smear slides were taken using Ayre's spatula and cytobrush fixed in 95% ethyl alcohol and ether, followed by visual inspection of cervix after applying 5% freshly prepared acetic acid.

In cases where VIA is positive, patient was enlisted for colposcopy. Colposcopic assessment will follow the technique of assessing abnormal areas after application of acetic acid followed by lugol's iodine and calculating modified Reid's index.

If colposcopy suggests then biopsy was done and sent in 10% formalin fixative. Colposcopy-directed biopsies will be processed, histopathological slides prepared and stained with hematoxylin and eosin and examined under a light microscope.

PAP smear results were categorized as Negative for intraepithelial lesion/malignancy (NILM), LSIL, HSIL, Invasive cancers. Biopsy results were categorized as chronic cervicitis, Atypical squamous/glandular cells, cervical intraepithelial neoplasia I (CIN I), CIN II, CIN III, carcinoma in situ, squamous cell carcinoma (SCC) and adenocarcinoma according to WHO.

Results

Table 1: Distribution on Basis of Age groups

Age	VIA positive	True positive	False positive	Percentage
30-40	107	68	33	13.5%
40-50	286	194	82	38.5%
50-60	110	77	49	15.3%
Total	503	339	164	67.39%

Table 2: Distribution on Basis of Acetowhitening

ACETOWHITENING	Frequency	PERCENTAGE
0	204	40.8%
1	146	29.0%
2	153	30.4%

Table 3: Distribution on Basis of Colposcopic Diagnosis

Colposcopic diagnosis	Frequency	Percentage
Inflammatory	164	32%
CIN 1	172	34%
CIN 2	108	21.4%
CIN 3	59	11.7%
Total	503	

Table 4: Distribution on the basis of treatment

Treatment	Frequency	Percentage
Thermsl ablation	167	58.3%
Cryotherapy	43	15.03%
LEEP	04	1.3%
Hysterectomy	14	4.8%
Total	286	

In the initial 2 year period, those women with VIA-positive lesions were treated with cryotherapy by the health workers immediately after cervical biopsy as "screen and treat method." After reviewing the protocol due to logistic issues of cryo gas supply, only women with biopsy confirmed precancerous lesions were recalled and treated ensuring compliance for the treatment as a "screen, test, and treat method." Colposcopically or histologically confirmed LSIL or HSIL lesions occupying <3 quadrants of cervix not extending into endocervical canal or vaginal fornices and without any evidence of invasive cancer were treated by cryotherapy using nitrous oxide gas with the standard double freeze technique. A course of presumptive

antibiotics was given after treatment. Those women requiring treatment for HSIL other than cryotherapy or with invasive cancer were referred to a higher center for appropriate treatment. Post-treatment advice was give to the women with a follow-up visit after 1 year.

Discussion

This study reports the experiences of implementing VIA-based cervical screening. VIA is a simple and affordable screening test with acceptable sensitivity and specificity in the range 50-88.6% and 66.7-89.7%, respectively.

The results show that adequately trained health workers under medical supervision

can effectively perform cervical screening, cryotherapy, and follow-up care even with few resources. The screen positivity was 10.75% and the detection rate of CIN 2+ lesions in this program was 1.05%. This is comparable with other research studies on VIA where positivity ranged from 6.6% to 27.4%. [9] The average sensitivity of VIA in various studies from low resource settings is 50% (range 14-95) with a specificity of 85%.

Since the results are immediately available, diagnostic tests and treatment can be done in the same visit ensuring good compliance for screen positive women. [10] In our program, around 85% of screen-positive women had diagnostic confirmation in the same visit. Linkage of the screen-positives to the diagnosis and treatment is also an integral part of the program. Cryotherapy is widely considered to be an effective and appropriate means of treating pre-cancerous cervical lesions. Cryotherapy has been advocated as a safe option for treating women with screen-positive lesions in low resource settings.

The “screen, test, and treat method” that was followed from the year 2008 onwards also suggests that it is equally effective, provided great care is taken to get the women with lesions for treatment. This will avoid overtreatment and reduce the logistic difficulties with cryo gas availability. But the rate of hysterectomy for HSIL is more as these women insist on definitive treatment methods after biopsy confirmation. A single round of screening would still offer good benefits for these women in reducing the incidence and mortality from cervical cancer. The RCT in Dindigul district in south India found there was a reduction in cervical cancer incidence and mortality by 25% and 35%, respectively, with a single visit VIA followed by cryotherapy done by mid-level providers. [11] As recommended by Alliance for Cervical Cancer Prevention (ACCP) and Global Guidance for Cervical Cancer Prevention by FIGO, VIA plus

cryotherapy programs using local physicians, nurses, midwives, and paramedical personnel could still result in a significant programmatic impact until affordable HPV deoxyribonucleic acid (DNA) tests become available. [12]

Our program proves that this cervical screening model can be easily adopted anywhere in order to reduce the burden of this disease. We conclude that VIA by trained female health workers is a safe, acceptable, and effective test that can save lives from cervical cancer even in remote areas with few resources. The experience from our program suggests that the performance of this test can be improved with good quality training and supervision as quality assurance is essential for a successful VIA-based program. These results have important implications for efficient service delivery in cervical screening programs in low-resource settings or even in integrating into primary care services.

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