

“Study of Spectrum of Cervical Pathologies in Acetowhite Lesions of Cervix”

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Keywords:

Cervical Cancer, Visual inspection of acetic acid, Cervicitis, Pre-Malignancy, Malignancy.

Abstract

Objectives of Study

To study the spectrum and proportion of cervical pathologies in aceto-white areas of the cervix.

Methodology

This cross-sectional study was conducted by Department of Obstetrics and Gynaecology. A mass screening for cervical cancer among women of age group 30-49 years of age in Vijaypura district was conducted. During screening women subjected for visual inspection of acetic acid (VIA). All women with aceto-white areas were enrolled in the study after considering inclusion and exclusion criteria. The aceto-white areas were subjected for biopsy, and the histopathological study of specimens was conducted. The results were noted.

Results

A total of 880 eligible women screened of which 72 women (8.2%) had aceto-white lesions on cervix. The histopathological report of biopsy specimen showed chronic cervicitis 61 (82.4%) out of 72 participants. 5 of biopsy report showed premalignant changes (4 LSIL, 1 HSIL) (6.8%). 1 biopsy report showed cervical cancer (1.4%).

Conclusion

Chronic cervicitis is the most common condition to produce aceto white areas in VIA. It is prudent to treat the cervical infection/inflammation before subjecting acetowhite areas on VIA to biopsy to rule out malignancy.

1. Introduction

Cervical cancer is an important health problem. It is the commonest cancer in females. Due to lack of awareness, many women end up with the advanced stage of cancer. Cervical cancer screening is a practice used by both developed and developing countries. Visual inspection with acetic acid is a

primary screening test in low resource settings for detection of premalignant and cervical carcinoma. Cervicitis results in false-positive VIA. ⁽¹⁾ The decision to provide immediate treatment depends on the lesion size, suspicion of invasion, and the examiner's expertise.

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In India, cancer of the cervix uteri is the 2nd most common cancer in females with an incidence rate of 9.4% (123,907 cases) and the second leading causes of death with a mortality rate of 9.1% (77,348) as per GLOBOCAN 2020. ⁽²⁾

Few studies show VIA is a simple and affordable screening test with acceptable in major part of country. Sensitivity and specificity in the range 50-88.6% and 66.7-89.7%, respectively, in a research setting. ⁽³⁾ VIA is an appropriate substitute in a situation with limited resources due to the fact that it offers immediate effects and requires little in the way of resources (both financial and human).

Certain kinds of human papilloma virus infection are the main cause of cervical cancer. An elevated risk of cervical cancer is associated with nearly 15 different strains of human papilloma virus. Human papilloma virus types 16 and 18 are the most prevalent viruses that cause cervical cancer. Any one form of human papilloma virus, which is quite common in sexually active women, is what causes cervical infections. ^(4, 5)

Only a small fraction of human papilloma virus infections proceed to cervical cancer and resolve spontaneously after two to four years. The women present high parity, immunological suppression, more sexual partners over the course of a life time, and continuous use of contraceptives are risk factors that are altered by a variety of conditions, including cigarette smoking and chronic infection. ⁽⁶⁾

The 35 to 50 year old high risk age group is regarded as the core element of successful screening programmes. Low resource settings can use a simple and affordable solution.

One round of HPV DNA testing considerably decreased the incidence of new cases of cervical cancer and mortality, according to a recent clinical trial conducted in rural India as a resource region. Two vaccines offer protection against 70% of the viruses that cause cervical cancer. The high cost of vaccines in developing nations is a major obstacle to widespread usage. ⁽⁷⁾

2. Methodology

The proportion of cervical pathologies was seen in this study in low resource settings. Source of data: The study was conducted at B.L.D.E (DEEMED TO BE

UNIVERSITY) Shri B.M. Patil Medical College Hospital and Research Centre. In this study, the women are selected as per the inclusion criteria and women attended outpatient department and women attended screening camps organised by Obstetrics and Gynaecology department.

Duration of study was January 2021 to May 2022. With inclusion criteria the sexually active married women in the age group of 30-49 years. Exclusion criteria included women who had frank growth, with vaginitis, with pelvic inflammatory diseases.

Cross-sectional study was conducted by Department of Obstetrics and Gynaecology included mass screening for cervical cancer among women of age group 30-49 years of age in Vijayapura district. During screening women subjected for visual inspection of acetic acid (VIA). In lithotomy position per speculum examination was done. Sterile Cusco's self-retaining vaginal speculum is inserted and cervix was inspected by naked eye. Acetic acid 3-5% was applied to the cervical areas and observed for aceto-white lesions. All women with aceto-white areas were considered for study and enrolled after inclusion and exclusion criteria. All the women with aceto-white areas were subjected for biopsy, the histopathological study of specimens was conducted and results were noted.

3. Results

The age ranged from 30 to 49 years of women. The mean age of study population was 37.72 ± 6.149 . Majority of the women belonged to 30 to < 35 years of age of study participant i.e. 307 (35%), least among women belonged to 40-44 years of age group i.e. 17% (149 study participant) (figure-1). As age of women increases ignorance towards her own health increases due to emotional and psycho-social aspects of her life.

The married life of study participants was from 1 year to 30 years (figure-2). The mean married life of study population was years 16.62 ± 6.526 (standard deviation). Among them the maximum is 10-14 years of married life of study participant constituted 478 women (54.3%). Major women had parity of 2 constituting 47.2% (415). Least parity of women was 8 constituted 0.1 % (1 of study participants).

In 880 total study participants with positive VIA was 72 study participants constituting prevalence of VIA is

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8.4% (figure-3). 806 has negative VIA results in study participants constituting 91.6 %.

72 cervical biopsy taken (VIA positive) biopsy results as follow (table 1), 46.2 % of biopsy report showed cervicitis of 72 VIA positive women (n-72) as in (figure 4), 37.9% of biopsy report showed cervicitis with squamous metaplasia (n-72). Total 61 (82.4) % of biopsy report showed chronic cervicitis of biopsy taken from aceto-white areas (VIA positive), 6.8% (4 LSIL, 1 HSIL) of biopsy report showed premalignant changes (n-72). 1 (1.4%) of biopsy report showed cervical cancer (n-72).

Chronic Non Specific Cervicitis finding was highest with 24 women, 33.8 % of total VIA positivity. 14 study participant biopsy showed Chronic Non-Specific Cervicitis with Squamous Metaplasia with Nabothian Cyst (18.9). 13 study participant biopsy showed Chronic Non-Specific Cervicitis with Squamous Metaplasia (17.6). 5 study participant biopsy showed chronic cervicitis (6.8), 1 study participant biopsy showed Chronic Non Specific Cervicitis With Papillary Endocervicitis, 3 study participant biopsy showed Papillary Endocervicitis, 1 study participant biopsy showed Papillary Endocervicitis With Squamous Metaplasia. 4 study participant biopsy showed no specific pathology, 1 study participant biopsy showed normal study. 4 study participant biopsy showed Chronic Non-Specific Cervicitis with Mild Dysplasia (LSIL), 1 Study Participant Biopsy Showed Chronic Non-Specific Cervicitis with Severe Dysplasia (HSIL), 1 study participant biopsy showed well differentiated squamous cell carcinoma.

4. Discussion

VIA positivity in our study was 8.4% where 880 study participants underwent VIA with direct visual inspection. In our study VIA positivity was present in 82.4% of cervical inflammation. Similar study done by HariPriya Vedantham in a Peri-Urban Area in Andhra Pradesh, India in 2010, VIA positivity was recorded in 23.6% with cervical inflammation. ⁽⁸⁾

In our study the VIA positivity was high mainly due to cervical inflammation as compared to other studies. From this study it can be predicted, population staying in this city mainly has high prevalence of cervical inflammation or mainly those with complaints has participated in this study. Poor repeatability of VIA

performance across large populations would be anticipated given the substantial regional variation in the frequency of cervical inflammation and the inability to pinpoint the infectious agent responsible.

The intervention study in Osmanabad, India, examined the effectiveness of HPV, cytology, and VIA tests for cervical cancer. However, the final assessment found that VIA (or Pap smear) screening was unsuccessful in lowering the incidence of advanced cervical cancer and related mortality ⁽¹⁰⁾. On the other hand, HPV screening significantly decreased the prevalence of advanced cervical malignancies and the related mortality. ⁽⁸⁾

It is most likely that VIA's (and cytology's) poor performance in the final analysis was caused by their poorer sensitivity in detecting women with cervical cancer or its precursors, and that the original judgement that VIA and the HPV assay had equal sensitivity was inaccurate. This body of research thus verifies the subjective VIA test's high degree of diagnostic accuracy variability, which is not significantly decreased even when employing standard protocols and training programmes. ⁽⁸⁾

The women should be encouraged for participating for self-hygiene practices hence reducing the exposure to genito-urinary infections. Hence reducing high prevalence of chronic cervicitis .this will help in reducing the high false positive results in VIA screening. The women should be made aware of various screening methods for Ca cervix and motivated for cervical cancer screening.

In our study positivity, sensitivity, specificity cannot be predicted. As all VIA positive study participant underwent biopsy, which showed high prevalence of cervicitis. If we follow "screen and triage", women would have over treated unnecessarily.

In our study women with age group 30-49 have undergone VIA screening. Screening should be done in all married women or sexually active women to rule out cervical lesions and treated as earliest possible. Women with more than 50 years and menopausal women should be encouraged to undergo screening procedure and should be educated regarding same, as most women in that age group least vaccinated.

VIA screening should be combined with other effective screening methods like VILI, Colposcopy, HPV DNA testing, biopsy, Cytological.

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Our study included 880 study participants of age group between 30-49 years. The mean age of study population was 37.49 ± 6.038 . Likewise the study conducted in Sankaranarayanan et al, to analyse the efficacy of the visual acetic acid test conducted by the doctor and paramedical worker. This constituted the major age group of 25-65 years. ⁽⁹⁾

Similar studies carried out in various places included age group mainly women from 20s and menopausal women (25- 85 years). In our study no menopausal women were included i.e above 50 years of age women were excluded.

5. Conclusion

Chronic cervicitis is the most common condition to produce aceto white areas in VIA. It is prudent to treat the cervical infection/inflammation before subjecting acetowhite areas on VIA to biopsy to rule out malignancy.

LIMITATION OF STUDY

We need large study groups covering wider geographical areas.

Reference

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Table

Table 1 Distribution of biopsy results in study participant.

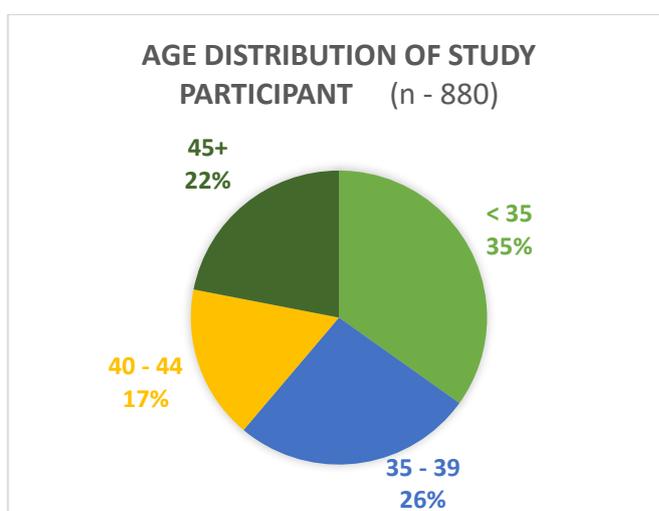
Biopsy Results (n-880)	Number of women	%
NO BIOPSY TAKEN	806	91.7
CHRONIC NON SPECIFIC CERVICITIS	24	2.7

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CHRONIC NON SPECIFIC CERVICITIS WITH SQUAMOUS METAPLASIA WITH NABOTHIAN CYST	14	1.6
CHRONIC NON SPECIFIC CERVICITIS WITH SQUAMOUS METAPLASIA	13	1.5
CHRONIC CERVICITIS	5	0.6
CHRONIC NON SPECIFIC CERVICITIS WITH PAPILLARY ENDOCERVICITIS	1	0.1
PAPILLARY ENDOCERVICITIS	3	0.4
PAPILLARY ENDOCERVICITIS WITH SQUAMOUS METAPLASIA	1	0.1
NO SPECIFIC PATHOLOGY	4	0.5
NORMAL STUDY	1	0.1
CHRONIC NON SPECIFIC CERVICITIS WITH MILD DYSPLASIA	4	0.5
CHRONIC NON SPECIFIC CERVICITIS WITH SEVERE DYSPLASIA	1	0.1
WELL DIFFERENTIATED SQUAMOUS CELL CARCINOMA	1	0.1
Total	880	100.0

Figure

Figure 1: Age distribution of study participant.



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Figure 2: Graph depicting married life distribution of study participant.

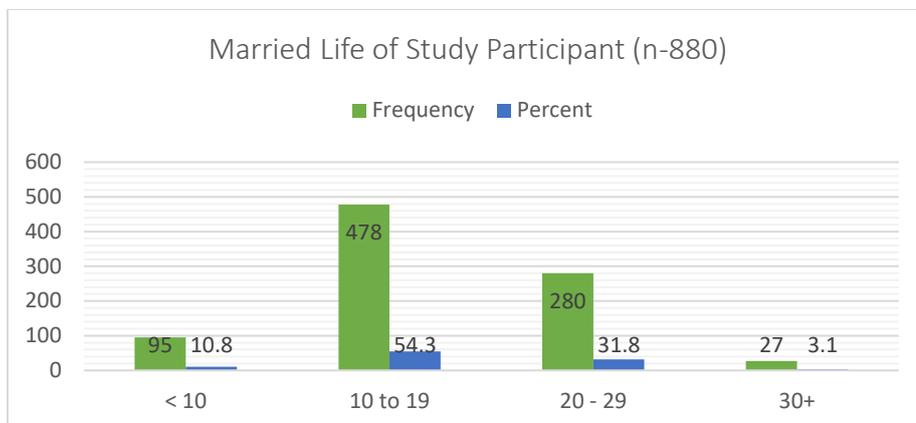


Figure 3: Distribution of VIA in study participant.

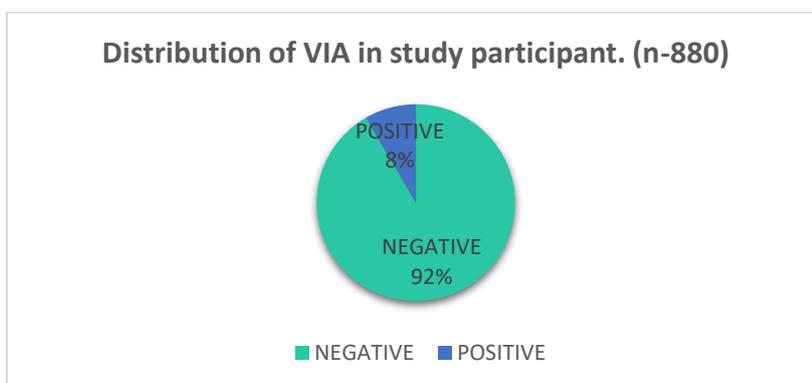


Figure 4: Distribution of biopsy results among via positive in study participant (n=72).

