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PRE-CANCEROUS CERVICAL LESIONS USING VISUAL INSPECTION ACETIC ACID (VIA) METHOD AMONG WOMEN

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ABSTRACT

Introduction: In modern era where urbanization, industrialization, life style changes and population growth are influencing the disease pattern, there is a paradigm shift from communicable disease to non-communicable diseases. Cervical cancer is the second most common diseases seen in women worldwide. It accounts for 6% of all cancers in women (WHO). Therefore, early detection is necessary to prevent the disease.

Objectives: To identify the prevalence of pre-cancerous cervical lesions using VIA method among women.

Methods: Conducted a cross sectional descriptive study among 210 women attending the outpatient department of urban health centre, Bangalore. Data collected using pretested VIA observation checklist. Painting of the ecto cervix was done by using 3% - 5% acetic acid and was observed for the aceto white lesions. Maintained the privacy and confidentiality throughout the study.

Results: The study revealed that the prevalence of pre-cancerous cervical lesions VIA positive was 1.9% (4 cases out of 210 women screened) with the mean age 36.13 years.

Conclusions: Visual Inspection Acetic acid (VIA) screening is simple, safe, feasible, cost effective, acceptable and affordable screening test in identifying the pre-cancerous cervical cancer lesions.

KEYWORDS : Pre-cancerous Cervical Lesions, VIA Method.

INTRODUCTION

In the early nineties when revolution was occurring in health care system throughout the world, India was facing a lot of deaths due to communicable diseases. However after independence, the Government of India took a lot of measures to improve the life expectancy of Indian population, these measures gave fruitful results by showing a massive control in mortality due to communicable diseases (WHO in South-East Asia Fifty years of WHO in South-East Asia, 2019)

In modern era where urbanization, industrialization, life style changes and population growth are influencing the disease pattern, a paradigm shift from communicable disease to non-communicable diseases like cancer, diabetes and hypertension, which in recent times have been seeing an increase in the incidence of cancer(WHO in South-East Asia Fifty years of WHO in South-East Asia, 2019)

The human body have billions of cells. Normally cells grow, multiply, dies and replaced by new cells. Sometimes, if anything goes wrong, cells don't die. They multiply out of control and grow into a lump (tumour) called cancer(Institute, 2019)

Cancer can happen to anybody. There are over 100 different types of cancer[2] ICMR reported that, the most common types of cancer observed in India among woman are cancer of Breast, Oral cavity and Cervix(ICMR, 1982). Cervical cancer is a type of cancer that occurs in the cells of the cervix in the lower part of the uterus that connects to the vagina.(Thomas, 2019)

The human papilloma virus (HPV) causes cervical cancer. The death from cervical cancer account for 20% in women worldwide(Kgaa, n.d.). There are over 100 types of HPV. However, only certain high risk type of HPV are associated with cervical cancer. Which include HPV 16, HPV 18, HPV 31, HPV 33, HPV 45. These viruses may cause changes in the cell lining of the cervix from normal to precancerous lesions

According to the World Health Organization, the death caused due to cervical cancer 250,000 deaths in 2005. Approximately 80% of these deaths occurred in developing countries.[7] Studies revealed that the prevalence of precancerous lesion is common(Aswathy Sreedevi ,Reshma Javed, 2015). A study conducted among 210 patients revealed that 34 (16.27%) had positive Pap test, 29 (13.87%) had positive VIA ,24 (11.43%) had positive VILI and 31 (14.75%) showed features of cervical intraepithelial neoplasia (CIN) on (Fortis Health care, 2019). Similarly, a study conducted in rural south India among 18,869 women revealed a VIA test positivity rate of 10.75%(Healthline, 2019).

The report of the cross sectional study reported that on observation the women had the following signs cervical erosion (22%), cervicitis (13.1%), vaginitis (8.4%) and cervical hypertrophy (7.9%) which showed there is a significant association between high parity and cervical cancer. The study recommended that cancer cervix screening is required among the women at regular intervals through camp approach in the community(ICMR, 1982).

VIA sounds like a scary way to test for cervical cancer, but in reality it's quite simple .VIA allows directly to see lesions and other changes in the cervix that are large enough to diagnose precancerous lesions(Rahatgaonkar, 2012).

With the evidence of above statistics and studies, it was felt that there is a need to study the prevalence of pre-cancerous cervical lesions using Visual Inspection Acetic acid (VIA) method among women. The present study will prove that VIA method as an early screening of cervical cancer.

Objective

1. To identify the prevalence of pre-cancerous cervical lesions among women.
2. To find the association between pre-cancerous cervical lesions and selected socio-demographic variables.

MATERIAL AND METHODS:

Operational definitions

- **Pre-cancerous cervical lesions** –It refers to the presence of aceto white lesions after application of 3%-5% acetic acid solution when cervix is examined with naked eyes.

- **Visual Inspection Acetic acid (VIA)** -VIA is a test in which the surface of the cervix is examined with naked eyes after application of 3% -5% acetic acid solution with one ml quantity. The presence of precancerous lesions is determined by using the color changes with the help of good light source (halogen) and Cusco's speculum.

- **Women**- refer to married women who are in the age group of 15-45years who are attending selected Urban Health Centres, Bengaluru.

To achieve the objectives a cross sectional descriptive design was adopted. A formal permission from the concerned authority was

obtained. A total of 210 subjects attending the urban health centre and fulfilling the selection criteria by systemic random sampling technique were recruited. Prior to the study, the researcher had undergone training course on screening of precancerous cervical lesions through VIA method under Registered Medical Officer, Primary Health Centre, Bagalur, TamilNadu. The tool was pretested and validated before the data collection.

The pretested tool consist of two sections:

- *Section A:* Socio-demographic variable profile with the details such as:
  Age, religion, education, occupation, marital status, monthly income, dietary pattern, age at menarche, menstrual cycle, age at marriage, types of napkins used, age at first pregnancy, age at last pregnancy, number of children, type of abortion, family history of cervical cancer, history of urinary and reproductive tract infection, method of family planning and use of contraceptives.

- *Section B:* Observation, check list for VIA category with interpretation.
  The researcher introduced and explained the purpose of study, obtained written consent from the subjects, maintained the privacy throughout the procedure. The screening procedure is as given below:-
- Asked the women to lie down in a modified lithotomic position on a couch with leg rests or knee crutches or stirrups.
- Observed the external genitalia and perineal region for any signs of excoriation, oedema, vesicles, papules sores, ulcerations and warts, swelling in inguinal/femoral region.
- The perineum was wiped with a soaked cotton swab or gauze soaked with an antiseptic solution.
- Gently introduced a sterile vaginal speculum and opened the blades of the speculum to view the cervix.
- Visualised the vagina in an adequate light source. The size and shape of the cervix, colour, and other abnormality of cervix were observed.
- Gently swabbed the ecto cervix prepared cotton swab soaked in 3% -5% of acetic acid.
- Observed the cervix for presence of any white lesions (aceto-white) after one minute.
- The findings were recorded in the VIA observation check list.
- After the observation, the cervix was cleaned with normal saline.

The concerned woman confirmed to be VIA positive, was referred for further investigation and follow-up.

RESULT:

A total of 210 women were recruited in this study. The age of woman participated ranged from 26-45years , the mean age was 36.13 years (SD = 3.819) and majority of the subjects were in the age group of 25-30 years.78 (37.1%) of the subjects had secondary education and only 6 (2.9%) subjects had graduated. On considering the marital status majority of the subjects 206 (98.1%) were married and only 4 (1.9%) were widowed. With respect to the religion majority 90 (90.5 %) belonged to Hindu religion and only 3(1.4 %) of the subjects were Christians. The mean age at menarche was 12.77 years (SD=1.030) and that of marriage was 20.28 years (SD=2.089). In regards to the type of sanitary napkin used majority of the subjects 154 (73.3%) used sanitary pad and only 56(26.7%) used cloth. Majority of subjects 170(81%) adopted family planning method out of which 141 (82.94%) subjects adopted permanent method whereas only 29(17.05%) of the subjects adopted temporary family planning method and all the subjects 29(100%) used copper-T. Majority of subjects used copper-T 26(89.65%) for more than 10 years.

Regarding the prevalence of pre-cancerous cervical lesion VIA positive was 2% (4 cases out of 210 women screened) with the mean age of 35.76 years. The similar study done in Fiji where cervical screening by using VIA showed that 9.9 % (190 women out of 1961) were VIA positive with aceto white lesions within the age group of 35 – 39 years. (Table 1)

On considering the association between pre-cancerous cervical lesions using VIA and selected socio-demographic variables. It showed that the calculated x2 values are greater than the table value at the level of significance $p<0.05$ in terms of relation with selected socio demographic variables such as age and type of sanitary napkins used. Hence, the H1 states that there is a statistically significant association between selected socio demographic variables and precancerous cervical lesions. A similar study was conducted in Rwandan country. The prevalence rate was 5.9% (17 out of 1002 women). With the mean age of women 37 years and early age of first pregnancy higher number of children born at younger age, all these factors are highly significant for cervical cancer.

Table – 1: Frequency and Percentage Distribution of VIA category of women n = 210

Variable	Frequency	Percentage
VIA category		
Negative	206	98.1
Positive	4	1.9

Table – 2: Association of the pre-cancerous cervical lesions with selected socio demographic variables. (n = 210)

Sl. No	Socio-demographic variables	Category	VIA CATEGORY		Chi-square ($\chi 2$)	P value
			Negative	Positive		
1.	Age (years)	<36	116	0	5.032	0.025 df=1 S
		>36	90	4		
2.	Employment status	Unemployed	84	2	0.138	0.710 df=1 Ns
		Employed	122	2		
3.	Monthly income (Rs)	<6000	116	3	0.558	0.455 df=1 NS
		>6000	90	1		
4.	Age at last pregnancy (years)	<24	104	1	1.019	0.313 df=1 NS
		>24	102	3		
5.	Undergone abortion	No	172	2	3.099	0.078 df=1 NS
		Yes	34	2		
6.	Adopted any family planning method	Yes	167	3	0.094	0.760 df=1 NS
		No	39	1		
7.	Age at marriage(years)	<20	137	4	1.995	0.158 df=1 NS
		>20	69	0		
8.	Age at menarche	<15	203	4	0.059	0.808 df=1 NS
		>15	3	0		
9.	Type of sanitary napkins used	Sanitary pad	153	1	4.871	0.027 df=1 S
		Cloth	53	3		
10.	Age at first pregnancy(years)	<20	101	3	1.059	0.304 df= 1NS
		>20	105	1		

DISCUSSION

This study result proved that the prevalence of pre-cancerous cervical lesions among women could be identified by VIA method. Visual Inspection Acetic acid (VIA) screening is safe, feasible, easy to administer, and is also considered cost effective in identifying the pre-cancerous cervical cancer lesions. The high burden of cervical cancer in India and Southeast Asian countries is due to poor to moderate living standards, a high prevalence of HPV (more than 10% in women aged more than 30 years) and due to lack of screening. In this study the presence of precancerous lesions was found positive for 2% (4 cases out of 210 women screened using VIA method. The result of this study revealed that the women participated in the study were ranged from 26-45years with the mean age of 36.13. Among the subjects 94.3% were non-vegetarian, 98.6 attained menarche at the age of 15yrs and above, 67.1% married within 15-10 years. It was interesting to note that the mean age at marriage was 21.16 years. The study also reports that 11 % of the subject had family history of cervical cancer. The study also revealed that the age of the woman and the type of sanitary napkins used had significant association with the precancerous lesions.

This study also emphasises that the nurses play a major role in identifying precancerous cervical lesions among women. Community health nurses can disseminate information regarding VIA method in rural remote and tribal areas in order to facilitate early diagnosis and prompt treatment of cervical cancer. Community Health Nurse plays an important part in reducing mortality and morbidity rate of cervical cancer.

The limitation of the study is that the follow-up of the positive subjects was not carried. Only the subjects were referred to the referral unit for further investigation. This study can be replicated in a large setting.

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Conflict of Interests: None declared.

REFERENCES

1. Aswathy Sreedevi ,Reshma Javed, A. D. (2015). Epidemiology of cervical cancer with special focus on India. International Journal of Women's Health, 7, 405–414.
2. Fortis Health care. (2019). Cervical cancer Symptoms, Causes and Treatment - Cervical cancer Diagnosis.
3. Healthline. (2019). Cervical Cancer Causes.
4. ICMR. (1982). Cancer Research in ICMR Achievements in Nineties.
5. Institute, N. C. (2019). What Is Cancer ? Differences between Cancer Cells and Normal Cells.
6. Kgaa, M. (n.d.). GLOBAL BURDEN OF CANCER IN WOMEN.
7. Rahatgaonkar, V. (2012). VIA in cervical cancer screening. Journal of Dental and Medical Sciences, 1(1), 1–4.
8. Thomas, J. (2019). Medical records and issues in negligence. Indian Journal of Urology, 25(3), 384–388. https://doi.org/10.4103/0970-1591.56208
9. WHO in South-East Asia Fifty years of WHO in South-East Asia. (2019).