

EFFECTIVENESS OF COLPOSCOPY IN DETECTING CERVICAL CANCER AMONG IRAQI WOMEN, 2022

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ABSTRACT

Background: Cervical cancer is the second most common type of cancer among women. It is a preventable tumor as it has a long preinvasive period and availability of effective treatment and screening programs. Colposcopy is a diagnostic procedure that allows checking cervix and vaginal wall for abnormal tissue. **Aim:** To evaluate the feasibility of colposcopy as a screening tool. **Materials and methods:** A total of 85 women aged 21 – 78 years participated in the study. Data were reviewed from the registry unit at Al Elwiyah Obstetric – Gynecological teaching hospital, Baghdad- Iraq. **Results:** Fifty-nine participants (69.4%) showed normal colposcopy results. Age, parity, smoking, duration of oral contraception, and multiple partners were with no significant effects on colposcopy findings. Being married too young or too old had a significant statistical differences in abnormal colposcopy findings ($p=0.05$). Positive VIA findings had a significant effect on abnormal colposcopy findings ($p = 0.01$). Abnormal PAP smear test results showed a significant effect on abnormal colposcopy findings ($p = 0.00$). **Conclusions:** Early marriage is a determinant for abnormal colposcopy findings. Positive VIA test is an indication for further investigation. Colposcopy is complementary to PAP smear.

KEYWORDS: Colposcopy, cervical cancer, screening.

INTRODUCTION

Cervical cancer is the second most common type of cancer among women, caused by human papilloma virus.^[1] This cancer has been considered preventable as it has a long preinvasive period and availability of effective treatment and screening programs.^[2] Unfortunately, it has uneven geographical distribution, with the vast majority of cases in developing countries.^[3] Implementation of organized screening programs in developed countries had a vital role in the declining incidence and mortality rate of cervical cancer.^[4]

PAP smear was the first screening tool used and only in few countries as it is expensive.^[5,6] This fact necessitates the findings of other screening instruments to cope the rising demands globally.^[4] A variety of other screening tools have been introduced to be used in conjunction with, or independently of the PAP test.^[4,5] These include: visual inspection with acetic acid (VIA) or Lugol's iodine (VILI), cervicography, speculoscopy, colposcopy, etc.^[7-10]

Colposcopy is a diagnostic procedure that allows checking cervix and vaginal wall for abnormal tissue.^[11] The practice of colposcopy represents the cornerstone of prevention of cervical cancer in developed countries. It played a pivotal role in reducing the incidence and mortality from cervical cancer over the past 50 years.^[12,13]

During last few decades, Iraq faced many disasters.^[14] These man-made crises showed a negative impact on health system and infrastructure, availability and accessibility to health facilities. All these had an enormous effect on population health.^[15] Screening programs are still weak and inactive in many cities. Data are not yet available on the HPV burden in the general population. Current estimates indicate that every year 286 women are diagnosed with cervical cancer and 193 die from the disease.^[16] This high mortality rate is due to late diagnosis of cervical cancer. This was the impetus to carry out this study.

AIM

To evaluate the feasibility of colposcopy as a screening tool.

MATERIALS AND METHODS

A total of 85 women aged 21 – 78 years participated in the study. Data were obtained from the registry unit at Al Elwiyah Obstetric – Gynecological teaching hospital, Baghdad- Iraq. Case files were reviewed from the 1st of June till 1st of December, 2022. Screening for cervical cancer was done to all participants by PAP smear, VIA, and colposcopy.

RESULTS

Figure^[1] shows colposcopy findings among studied sample. Fifty-nine participants (69.4%) showed normal test results.

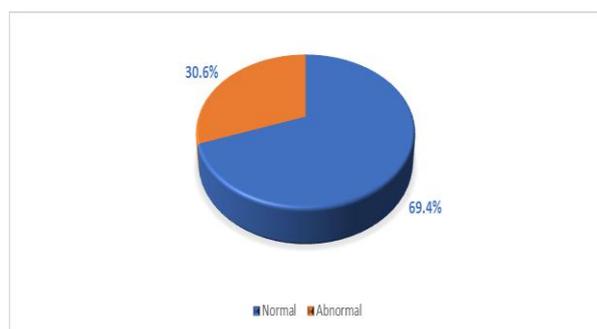


Figure 1: Colposcopy findings among studied sample.

Table [1] shows twelve women (26.7%) aged < 40 years and fourteen participants (35%) aged \geq 40 years showed

Table 1: Distribution of the study sample characteristics with abnormal colposcopy findings.

Variables		Total		Abnormal colposcopy findings	
		Freq.	%	Freq.	%
Age in years	< 40	45	52.9	12	26.7
	\geq 40	40	47.1	14	35
$\chi^2 = 0.7$		p = 0.4		d.f. = 1	
Age at marriage (years)	14 - 19	58	68.2	21	36.2
	20 - 29	23	27.1	3	13
	30 - 39	3	3.5	1	33.3
	\geq 40	1	1.2	1	100
p = 0.05					
Parity	< 3	21	24.7	3	14.3
	\geq 3	64	72.3	23	35.9
$\chi^2 = 3.5$		p = 0.06		d.f. = 1	
Smoking	Yes	6	6	2	33.3
	No	79	94	24	30.4
$\chi^2 = 0.1$		p = 0.7		d.f. = 1	
Combined Contraceptives Pills	< 5 years	41	48.2	12	29.3
	\geq 5 years	44	51.8	14	31.8
$\chi^2 = 0.07$		p = 0.8		d.f. = 1	
Multiple partners	Yes	23	27.1	9	39.1
	No	62	72.9	17	27.4
$\chi^2 = 1.1$		p = 0.3		d.f. = 1	

abnormal colposcopy findings. Age was with no significant effect on colposcopy findings (p = 0.4).

Out of 58 women got married at their twenties, 21 (36.5%) were with abnormal colposcopic findings. Of those married at their 3rd decades, 3 (13%) were showing abnormal colposcopic findings. One participant married at her 4th decade had abnormal colposcopic findings. Being married too young or too old had a significant statistical differences in abnormal colposcopy findings (p=0.05).

Most females with low parity (less than three children) showed abnormal test findings (85.7%) than those with higher parity (64.1%). Parity was with no significant effect on colposcopy findings (p = 0.06).

Two (33.3%) and 24 (30.4%) of smokers and non-smokers, respectively, were with abnormal colposcopy. No significant differences in colposcopy findings between smokers and non-smokers (p = 0.7).

Abnormal colposcopy among women used combined contraceptive pills for < 5 and \geq 5 years were 12 (29.3%) and 14 (31.8%), respectively. No significant differences in abnormal colposcopy between different durations of combined contraceptive pills (p = 0.8).

Female with single partner (72.6%) showed higher abnormal test results than those with multiple partners (60.9%). Number of partners showed no significant impact on test results (p = 0.3).

Table^[2] shows the distribution of abnormal colposcopy finding with VIA and PAP smear test findings. Females with positive VIA test (39%) showed more abnormal colposcopy finding than those with positive VIA (11.5%). Positive VIA findings had a significant effect on abnormal colposcopy findings ($p = 0.01$).

Females with abnormal PAP smear (52.2%) showed higher abnormal colposcopy findings than those with negative PAP smear (5.1%). Abnormal PAP smear test results showed a significant effect on abnormal colposcopy findings ($p = 0.00$).

Table 2: Distribution of abnormal colposcopy findings with VIA and PAP smear test results.

Variables		Total		Abnormal colposcopy findings	
		Freq.	%	Freq.	%
VIA test	Positive	59	69.4	23	39
	Negative	26	30.6	3	11.5
p = 0.01					
PAP smear	Normal	39	45.9	2	5.1
	Abnormal	46	54.1	24	52.2
p = 0.00					

DISCUSSION

Cervical cancer is believed to be emerging from infectious disease in 70% of cases^[17,18], but the infection alone is not sufficient for its occurrence.^[19] Colposcopy is the key procedure needed to evaluate abnormal or inconclusive cervical cancer screening tests. Its accuracy in identifying cervical neoplasia depends on the knowledge and skills of the colposcopist. The main benefit of colposcopy is the accurate identification of cervical precancerous and early invasive cancer.^[20]

The study revealed that 30.6% of the study participants showed abnormal colposcopy findings. This high rate might be attributed to the small sample size. This finding is like that in literature.^[21]

Studied women being married at 14 - 19 years old showed a significant higher abnormal colposcopy finding than other age groups ($p = 0.05$). This might be due to earlier marriage, multiple sexual partners, and smoking. This might lead to high prevalence of transient HPV infections and regression rates of dysplasia.^[22-24]

Abnormal colposcopy findings was significantly high among those with positive VIA test than those with negative test ($p = 0.01$). Colposcopy is a subjective assessment, not all abnormalities have distinctive appearances.^[25] Many false-positive findings in VIA test are due to immature squamous metaplasia and inflammatory lesions.

Abnormal colposcopy finding was significantly high among those with abnormal PAP smear than among this with normal test results ($p = 0.00$). Colposcopy is complementary to cytology. Cytology (PAP smear) is the lab method while the colposcopy is the clinical method of early detection of abnormal cells.^[26]

CONCLUSIONS

Early marriage is a determinant for abnormal colposcopy findings. Positive VIA test is an indication for further

investigation. Colposcopy is complementary to PAP smear.

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Author's Contribution

The work on this research was a teamwork.

Conflict of Interest

The authors declare that there is no conflict of interest with present publication.

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