



Prevalence of Abnormal Pap Smear Results in Syrian Women

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Abstract Background: Currently, there is no screening program for the early detection and management of cervical cancer in Syria. Furthermore, lack of awareness about cervical cancer and its screening tests made it very difficult to detect the dysplastic changes at an early stage. **Materials and Methods:** This is a retrospective study in women between 14-70 years old reviewing different clinics between June 2019 and July 2020 in Syria. After obtaining written consent, demographic and reproductive questionnaires were done. Data was analyzed using SPSS 25.0. **Results:** Abnormal Pap smear results included 213 cases (68.9% of all sample) with dysplastic changes in 38 cases (12.2% of all sample) with the majority of them being LGSIL (low grade squamous intraepithelial lesion) with 56.6% (20 cases of the 38 cases). **Conclusions:** Given the high prevalence of LGSIL compared to other studies in similar countries, increasing the awareness about cervical cancer risk factors' and emphasizing the importance of having screening programs for the early detection of cervical among women in Syria seems very necessary.

Keywords Pap smear, Cervical cancer (CC), Women, Syrian

Introduction

Cervical cancer (CC) prevalence differs a lot around the world especially between developing and developed countries, which have a lower incidence because of the highly efficient screening tests. While on the other hand, the prevalence in developing countries is still high because it is difficult to have these tests regularly. According to the latest world cancer statistics, CC (with 528000 new cases annually) is considered the fourth most common cancer in women globally and the second most common in developing areas (445000 new cases per year). CC causes 266000 deaths per year around the world, which makes it the fourth place in cancer related deaths and in the third place in developing countries with a mortality rate of 230158 cases [1]. In the USA in 2017, it is estimated that about 12,820 new cases of invasive cervical cancer will be diagnosed and about 4,210 women will die from it [2].

Cervical cancer has a long latency period (pre-cancerous) before transforming into a malignancy, because of this early detection can protect many women from death [3].

HPV (human papilloma virus) (a sexually transmitted disease) is the cause of cervical cancer in 70% of the cases [4] and thus it is less common in conservative societies and religious countries.

The incidence could be limited by giving HPV vaccine for high-risk women and doing regular Pap smear test [5].

Materials and Methods

This study was a retrospective study of the patients reviewing clinics between June 2019 and July 2020 in Syria. The study population included 14-70 years old women living in urban and rural areas of Damascus and the other cities in Syria. 309 patients were included in our study.



For the data analysis Roc Curve with Kendall's tau-b factor were used to show the correlation between the Pap smear test results and the study variables. Statistical Analysis was done by using SPSS 25.0(SPSS Inc., USA)

Results

Most of the participants were between 20 and 55 years and housewives. The mean age of first marriage in participants was 20. The mean age of first pregnancy was 20. Most of the women had ≤ 3 parities. (Table 1)

Table 1: Demographic Characteristics of participants

Variable		Frequency	Percent	Total
Age	≤ 25	50	16.2	309
	26-45	183	59.2	
	46-70	76	24.6	
Living area	Urban ¹	144	46.6	309
	Rural ²	165	53.4	
Parity	≤ 3	188	60.8	309
	4-6	86	27.9	
	≥ 7	35	11.3	

Pap smear test results revealed 68.9% of the cases (213 cases) with abnormal changes with inflammatory changes in 175 (56.6% of all sample) and cervical dysplastic changes in 38 cases (12.2% of all sample) with 52.6% (20 cases) of them related to LGSIL (highest ratio). Table 2 shows the percentage of each abnormal change.

Table 2: Abnormal Pap smear results percentage

Variable	frequency	Percent from the abnormal dysplastic changes	Percent from the whole sample
Abnormal changes	213	-	68.8
Inflammatory changes	175	-	56.6
Dysplastic changes	ASCUS	1	0.3
	LGSIL	20	52.6(highest ratio)
	HGIL	17	44.7

A statistically significant association was observed between the Pap smear test results and the age of marriage ($P < 0.04$), habits (smoker or nonsmoker) ($P < 0.008$), living address ($P < 0.001$), number of parities ($P < 0.043$), age of first pregnancy ($P < 0.02$), symptoms (especially postcoital bleeding) ($P < 0.02$), cervical appearance ($P < 0.000$) Table 3.

Table 3: The relation between Pap smear results and risk factors with significant association

			Smear
Kendall's tau_b	Age of marriage	Correlation Coefficient	-0.042*
		Sig. (2-tailed)	0.030
	habits	Correlation Coefficient	-0.070**
		Sig. (2-tailed)	0.009
	address	Correlation Coefficient	-0.084**
		Sig. (2-tailed)	0.002
	number of parities	Correlation Coefficient	0.193**
		Sig. (2-tailed)	0.000
	age of first pregnancy	Correlation Coefficient	-0.095**
		Sig. (2-tailed)	0.001
	symptoms	Correlation Coefficient	0.087**
		Sig. (2-tailed)	0.003

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)



Discussion

Cervical cancer is one of the most common causes of death among women in developing countries.

We reviewed those with significant results (P value <0.05 and a strong correlation coefficient).

The mean age of marriage of women in our study was 20 years old. It is thought that this detail is was important because women married at ages younger than 18 years old had significantly associated abnormal Pap smear results [6,7]. In a similar study the cervical cancer prevalence dropped by 6.3% when the number of marriages between (15-19 years old) was reduced [8]. In our study, women who were married at ages between 12-20 had the highest dysplastic changes.

Number of parities is highly associated with CC risk. According to a study done by the International Collaboration of Epidemiological Studies of Cervical Cancer, women with 7 or more pregnancies had a 1.76 higher risk compared to women with 1-2 full term pregnancies [9]. In our study, 11.3% of women had 7 or more parities.

The age of first pregnancy (AFP) is highly related to CC risk. In developing countries, AFP and age of first sexual intercourse (AFSI) are strongly correlated [10]. In our study, the mean AFP was 20 years old.

Pap smear test results were abnormal in 68.9% of the cases (213 cases) and 56.6% of them (175 cases) had inflammatory changes. Cervical dysplastic changes were observed in 38 cases (12.2% of all sample) with 2.7% (1 case) of them related to ASCUS, 52.6% (20 cases) related to LGSIL (highest ratio), 44.7% (17 cases) had HGIL.

Conclusion

This high ratio shows the importance of our study and is most likely due to lack of screening programs, health care, awareness of the disease and the decreasing number of healthcare practitioners. All led to the delay in the early detection and management of cervical abnormalities.

Compliance with Ethical Standards

Funding: This study was not funded by any institution.

Ethical approval: The names and personal details of the participants were blinded to ensure privacy.

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