DOI: 10.7860/JCDR/2014/8115.4422

Original Article

Obstetrics and Gynaecology Section

Knowledge, Awareness and Prevention of Cervical Cancer among Women Attending a Tertiary Care Hospital in Puducherry, India

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ABSTRACT

Background: Cervical cancer is one of the most common cancers among women worldwide, with highest mortality in India. The incidence and mortality of cervical cancer can be reduced by screening women for precancerous lesion and by administration of human papilloma virus vaccine to adolescent girls. Knowledge of the women about cervical cancer and awareness about its prevention are the key factors that determine their utilization of screening services.

Methods: A cross sectional survey of women attending Gynaecology Out-Patient Department (OPD) in a tertiary care hospital in Puducherry was conducted. Information about their knowledge of cervical cancer, awareness of its prevention and their socio demographic characters were collected.

Results: Mean age of the study population was 40.45 ± 12 years. Less than half of the study population (178, 44.5%) knew about cervical cancer. Less than one-fourth of the population knew about screening services for prevention of cervical cancer, and majority (389, 97.2%) were not aware of vaccination as prevention for cervical cancer.

Conclusion: Our study population shows poor knowledge about cervical cancer and is unaware of the concept of prevention. Hence extensive health education to the public is needed regarding cervical cancer and its prevention.

Keywords: Cancer cervix, HPV, HPV vaccine, Screening, Prevention

INTRODUCTION

Cervical cancer is the leading cancer and leading cause of cancer mortality in India accounting for 23.3% of all cancer deaths in women [1]. There is a high incidence belt for cervical cancer in the north eastern districts of Tamil Nadu, India with Puducherry, an union territory having higher age adjusted incidence (39.2/100,000 population) compared to nearby districts Villupuram (31.1/100,000 population) and Cuddalore (29.9/100,000 population) [2]. The prevalence and burden of cervical cancer is much higher among women of low Socio-economic Status (SES), as well as among rural women in India [3,4].

Since the main risk factor for the development of cervical cancer is human papilloma virus (HPV) infection, [5] Vaccination with HPV vaccine confers protection against cervical cancer [6].Also screening for precancerous lesions reduces the incidence and mortality from cancer cervix. Although cytology based screening program using Papsmears have been found to be effective in developed countries [7] alternative screening methods which can be more effective in the settings with low resources is using either VIA or VILI [8].

Unlike developed countries, cervical cancer prevention programmes have failed to meet their objectives in developing countries due to financial, social and logistical problems [9,10]. The current study aims to assess the knowledge and awareness of cervical cancer and its prevention in women attending a tertiary hospital in a rural setting in puducherry and the socio demographic factors associated with accessing the screening services.

METHODS

This cross sectional study was conducted in Sri Manakula Vinayagar Medical College and Hospital, which is a tertiary care hospital in rural setting in Puducherry with more than 90% of the patients coming from surrounding rural communities. For the purpose of sample size calculation statistical software open Epi: 2.3 version was used. At 95% confidence level, 80% power and relative precision of 4.5% the required sample size calculated on the basis of awareness of 72% from Kerala study [11] was 399. Four hundred women attending the Gynaecology department were recruited over three months from July 2013 to September 2013.

With monthly turnover of 2,000 patients, two days were randomly chosen in a week. Employing systemic random sampling every fifth patient attending the gynaecology department was included in the study. Known cases of cervical cancer and women who had undergone hysterectomy were excluded from the study. Informed consent was taken and the women were interviewed using structured questionnaire. Blinding of the subjects was not required as no intervention was made and it was a cross-sectional study. The study protocol was approved by the Institution ethics committee.

MEASURES

The questionnaire was designed based on cervical cancer awareness measure toolkit version 2.1. It was pretested on a sample of 30 women and modified accordingly for use in the study [12]. It consisted of 4 parts: Socio demographic information, knowledge about cervical cancer, awareness about preventive measures for cervical cancer, participation and barriers to attending screening services. The section on knowledge about cervical cancer consisted of questions about risk factor and symptoms of cervical cancer. Correct answer was given 1 point and the total score for this section was 11 for risk factor and 11 for symptoms of cervical cancer. A score of <4 was considered as some knowledge of cervical cancer and ≥4 as good knowledge of cervical cancer. Since this was not an interventional study the women were not given preinterview education. Their awareness about primary and secondary preventive measures for cervical cancer was assessed. Women's participation in screening services was enquired and those who had never attended screening services were enquired about the likely reasons for not utilizing them. After interview the women were given health education regarding cancer cervix and willing participants were screened with Pap smear.

STATISTICAL ANALYSIS

Statistical analysis was performed using SPSS version 16. Frequencies and percentages were calculated and Chi-square was applied to find out the significance of socio-demographic variables on awareness and practice of cervical cancer screening. p-value < 0.05 was considered significant.

RESULTS

The mean age of women in the study population was 40.45 ± 12 years. Less than half of the study population was aware of cervical cancer [Table/Fig-1] and only one-third of the women had knowledge about its risk factors and symptoms [Table/Fig-2]. Smoking cigarettes (10.3%), long term use of oral contraceptive pill (16.3%), poor genital hygiene (7.5%), having a sexual partner with multiple partners (15%) were considered the major risk factors for cervical cancer. Of the symptoms of cervical cancer, bleeding during or after sex (15.3%), vaginal bleeding after menopause (10.3%), pain during sex (10%) and persistent low back pain (9.8%) were considered more frequently by the women. Only 7.3% of the women considered themselves at risk of cervical cancer.

Women's education status and occupation influenced their awareness of screening [Table/Fig-3]. Lack of awareness (329, 82.25%) and absence of symptoms (45, 11.25%) were the main reason given by women for not undergoing screening.

Factors	Yes	No
Cervical cancer	178 (44.5%)	222 (55.5%)
Papsmear	49 (12.2%)	351 (87.8%)
Vaccination	11 (2.8%)	389 (97.2%)

[Table/Fig-1]: Awareness of cervical cancer and its prevention in study population

Knowledge factors	Nil n (%)	Some n (%)	Good n (%)
Knowledge of risk factors	268 (67%)	89 (22.2%)	43 (10.8%)
Knowledge of symptoms	276 (69%)	92 (23%)	32 (8%)
Self perceived risk	Never 10 (2.5%)	Not likely 357 (89.2%)	May or may not 33 (7.3%)
Source of information	Health staff 33 (8.2%)	Media 65 (16.3%)	Neighbours 68 (17%)

[Table/Fig-2]: Knowledge about cervical cancer and source of information in studied subjects

Socio-demographic variables	Total number	Aware of screening		Practice of screening	
	n (%)	Yes n (%)	p-value	Yes n (%)	p-value
Age					
18-35 Yrs	153 (38.3%)	32 (8%)	0.277	6 (1.5%)	0.436
36-60 yrs	247 (61.7%)	41 (10.3%)		14 (3.5%)	
Education status					
Nil	127 (31.8%)	15 (3.75%)	.000	3 (0.8%)	0.173
Primary	86 (21.5%)	12 (3%)		5 (1.2%)	
Secondary	176 (44.1%)	38 (9.5%)		12 (3%)	
Graduate	11 (2.8%)	8 (2%)		0 (0%)	
Occupation					
Housewife	254 (63.5%)	47 (11.7%)	0.002	12 (3%)	0.087
Coolie	136 (34%)	20 (5%)		6 (1.5%)	
Teacher	10 (2.5%)	6 (1.5%)		2 (0.5%)	
Distance to nearest health care					
<1 Km	165 (41.2%)	34(8.5%)	0.758	10 (2.5%)	0.216
1-3km	96 (24%)	17 (4.3%)		4 (1%)	
3-5km	82 (20.5%)	13 (3.2%)		6 (1.5%)	
>5km	57 (14.2%)	9 (2.3%)		0 (0%)	

[Table/Fig-3]: Association of socio demographic characters to awareness and practice of cervical cancer screening

DISCUSSION

This paper presents socio-demographic variation in the knowledge and awareness of prevention and control of cervical cancer in a rural population in a developing country. Our study showed that 44.5 % of the women were aware of cervical cancer and 18% were aware of screening where as in a study conducted in rural population of Kerala, almost three-fourth of the study population was aware of cervical cancer and its screening [11]. This could be probably explained by the difference in the education status of study population in the two studies.

In our study, better education and occupation was found to have significant impact on the awareness of screening which is consistent with findings in studies done in Wufeng County, China [13,14]. But education and occupation did not have significant effect on practice of screening which is only 5%. Similar association was reported by Obeichina and Mbamara in Onitsha, southeast Nigeria [15]. This is probably because of the poor utilization of the screening services by the women, that significant difference could not be made out. But another study conducted among women in a rural district of Tanzania reported 22.6% of their women to have had cervical cancer screening [16].

Age of the women as well as distance to health facility did not have significant effect on utilization of screening services in our study unlike other studies where younger and better educated women were willing to undergo screening [13, 17-19]. Tanzania study identified that women's knowledge about cervical cancer, accessibility to screening facility and husband's approval influenced their screening status [16].

Lack of awareness about screening services, no symptoms and fear of procedure were the reason given by our women for not undergoing screening which is similar to the Kerala study [11]. Few among our study population, 6.5% had heard of HPV infection as a risk factor and 2.8% knew about HPV vaccination. In a study conducted in China, 22.1% and 13.3% of the study population had heard of HPV and HPV vaccine respectively [20].

The knowledge level about cervical cancer was low among the participants inspite of the introduction of National Cancer Control Programme in India. This is probably because the primary health care facilities are often over burdened and under resourced [21]. Due to limited resources VIA is being offered to women for screening between 30-69 years of age even though cytology is considered a better screening tool [22]. Also the high incidence of cervical cancer can be reduced with introduction of national HPV vaccination programme but for the high cost of the vaccines which is not feasible in our country without external help [23].

In summary, our study population shows poor knowledge about cervical cancer and is unaware of the concept of prevention. If the women had full information on cervical cancer and its prevention and understood the importance of screening their response to NCCP will be better. Hence, extensive health education to the public is needed regarding cervical cancer.

This study has some limitations and measurement bias. It was a cross sectional study conducted among women attending a tertiary care hospital from nearby rural areas and so it is not representative of any particular rural area. The women were of low income and less educated group and so the results may not be generalized to all women, particularly those in urban areas. The method of interviewing rather than self administered questionnaire may have influenced the results as some of the questions were close ended and some women may have responded in a positive manner to present themselves as knowledgeable.

CONCLUSION

Though cervical cancer is the leading cancer among women in Puducherry, our study has shown that they are ignorant about

this completely preventable disease. Hence, extensive health education to the public is needed to improve their knowledge with an emphasis on the fact that both vaccination and screening are the new standards for prevention of cervical cancer, as HPV vaccination prevents most of the cervical cancer and screening can detect precancerous lesions which can be mitigated by treatment. Also utilization of the services of media like television, newspaper and radio can have massive impact in improving the knowledge.

ACKNOWLEDGEMENT

The authors would like to acknowledge Dr.Ghorpade Arun, Assistant Professor, Department of Community Medicine for his review and help in completing the study.

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FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Nov 16, 2013**
Date of Peer Review: **Mar 29, 2014**
Date of Acceptance: **Apr 13, 2014**
Date of Publishing: **Jun 20, 2014**