



Nursing staff awareness of cervical cancer and pap smear screening in a remote medical college hospital in South India

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Abstract:

Background: One in every five women in the world suffering from cervical cancer belongs to India, which has the largest burden of cervical cancer patients in the world. **Objective:** This study is intended to know the awareness of cervical cancer and to determine the knowledge, attitude and practice (KAP) of Pap smear screening among the nursing staff in Government General Hospital, Anantapur, Andhra Pradesh, India. **Design:** Cross sectional study. **Setting:** Tertiary care teaching hospital. **Methods:** A preformed questionnaire based survey was conducted after taking informal consent of 130 staff nurses working in our institution. The questionnaire was mostly about knowledge of cervical cancer, its risk factors, its screening techniques and the attitude of the staff nurses towards cervical cancer screening and its practices. **Statistical analysis:** Chi-square test. **Results:** In this study, almost 86.9% of the respondents knew that Pap smear is used for detecting cervical cancer but only 70% knew that it can even detect pre cancerous lesions of cervix. Only 33.8% knew that cancer cervix can present without any symptom. About 76.9% of the respondents knew that HPV infection is a risk factor for cancer cervix, but only 58.4% knew about HPV vaccine. About 83.8% of respondents agreed that all married women should be screened for cancer cervix at least once in a life time. 70% of the respondents thought that Pap smear testing is a doctor's procedure and only 24.6% of the respondents have themselves undergone Pap smear testing. **Conclusions:** For successful implementation of cervical cancer screening programme, the nurses should be targeted first by education and sensitization, so that they can play pivotal role in developing the awareness, confidence and compliance of women. In this study, though knowledge of pap smear as a screening procedure for cancer cervix is high, its practice is still low.

Key words: Cervical cancer; Pap smear; Nursing staff awareness.

Introduction

Cervical cancer is the third commonest cancer worldwide. India accounts for a quarter of the world's burden (126,000 cases out of 450,000 new cases each year), with up to 80% of the women presenting with an advanced disease [1]. Cervical cancer is preventable, as the disease can be diagnosed in its precancerous stage. Screening by cervical cytology is the most common method used for detection of the disease at an early stage.

In a country like India, with predominant rural population of low socio economic status, with no knowledge of sexual hygiene, living in areas of poor medical facility and with history of marriage at an early age and multi parity, it is a major challenge to formulate a screening programme, within existing resources, that is easily available, to a large section of the society. Hence the need to have an effective mass screening program, aimed at specific age group for detecting precancerous conditions, before they progress to invasive cancer [2]. A randomized controlled trial in India showed that even a single lifetime screening test significantly decreased incidence of advanced cervical cancer and subsequent mortality compared to no screening [3]. There is solid evidence that regular Pap smear screening reduces the cervical cancer incidence and mortality by at least 80% [4].

As the doctor to patient ratio is low in India i.e., 1:2000 according to MCI (Press information bureau, GOI M of HFW, Nov 2011), staff nurses if trained properly, can make aware and screen all the women coming to hospital for any of their problems, by Pap smear examination or at least by VIA like methods, to detect suspicious cases. KAP study will bring forth the weak points among nurses, so that a comprehensive practical training for staff nurses can be organized. In India it is estimated that new cervical cancer cases may rise up to 139,864 by 2015 [5]. Therefore awareness among nurses is the need of the hour, to implement successful screening programmes for cervical cancer in India.

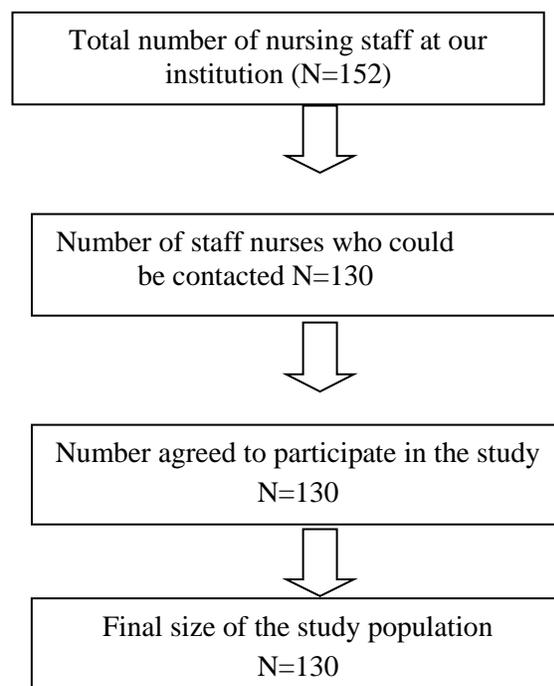
The present study was undertaken to know the awareness of knowledge related to cervical cancer among the staff nurses and to explore the attitudes and the practices among nurses such as Pap smear with a view to sensitize them as a first step towards increasing screening up take in the community.

Materials and Methods:

This descriptive cross sectional study was conducted in Govt. Medical College Hospital,

Anantapur, Andhra Pradesh, which is a teaching institute, on 130 female staff nurses over a period of two months from 1st April, 2013 to 30th May, 2013. Among 152 staff nurses working in the hospital, we could contact 130 nurses, who had accepted to participate in the study (Chart 1)). After taking informal consent, a preformed questionnaire based survey was conducted, which contained questions about the demographics, knowledge and risk factors and signs and symptoms of cervical cancer and diagnostic modalities other than Pap smear, their attitude and practices about cervical cancer screening . We tried to make the questions short, clear and understandable to the staff nurses with only few medical terminologies. The data was entered in to MS Excel software. Proportion and Chi square was applied for the analysis and interpretation was taken.

Chart 1-Study frame



Results

Among the respondents, the age group of 31-40 years formed the largest with 32% of them belonging to this age group. 93% of the participants were married and about 47.6% had undergone tubectomy. 50% of the participants had 2 children (Table 1). Of all the respondents, only 82% knew that cancer cervix is curable if detected early and 86% knew that Pap smear can detect cancer, where as only 70% knew that it can even detect precancerous lesions of cervix. Only 33.8% knew that the cancer cervix can present without any symptoms. About 76% knew that it can present as

post menopausal bleeding or irregular bleeding, but only 56% knew that it can even present as post coital bleeding. 82% of the respondents stated that it can present with foul smelling discharge. The risk factors like starting sex at an early age, having many sexual partners and multi parity were known to 60-70% of the respondents. 76.9% of the respondents knew that HPV is a risk factor for cancer cervix, but only 58.4% knew about HPV vaccine (Table 2). About 47.6% participants knew that screening should begin at 21 years or within 3 years of starting of sexual activity, whichever is earlier.

Table 1: Socio demographic characteristics of participating staff nurses (N=130)

Parameter	Number	Percentage
Age		
21-30	27	21.0
31-40	41	32.0
41-50	35	27.0
51-60	27	21.0
Marital status		
Un married	121	93.0
Married	9	7.0
Parity		
Para-0	13	10.0
Para-1	33	25.0
Para-2	65	50.0
Para-3/more	10	8.0
Contraception used		
Natural	18	13.0
Pills	1	0.7
Injectables	0	0.0
Barriers	2	1.5
IUCD	15	11.5
Tubectomy	62	47.6
Vasectomy	2	1.0
No method	21	16.1

About 76.9% of the participants thought that every woman is to be screened after 30 years of age, where as overall 83.8% of the respondents agreed that all married women should be screened for cancer cervix at least once in a lifetime. 34.6% of the participants thought that screening is to be done only in the presence of symptoms. Although 91.5% respondents knew about cervical biopsy, but only

43% knew about visual inspection after acetic acid application (VIA) and only 47.6% knew about colposcopy as a diagnostic modality. About 56% respondents agreed that they gained information about Pap smear, while working in our institute (Table 2).

Table 2: Knowledge among staff nurses about cervical cancer screening (N=130)

Knowledge tested	Correct response	
	Number	Percentage
Cancer cervix curable if detected early	107	82.3
Pap smear test can detect cancer cervix	113	86.9
Pap smear can detect pre cancerous lesion of cervix	92	70.7
Cancer cervix can present without any symptom	44	33.8
Cancer cervix can present with irregular abnormal vaginal bleeding	99	76.1
Cancer cervix can present with post menopausal bleeding	101	77.6
Cancer cervix can present with post coital vaginal bleeding	73	56.1
Can present with foul smelling vaginal discharge	107	82.3
Knew human papilloma virus infection as a risk factor for cancer cervix	100	76.9
HPV vaccine known to	76	58.4
Started having sex at an early age a risk factor	79	60.7
Having multiple sexual partners a risk factor	92	70.7
Given birth to many children a risk factor	76	58.4
Use of condoms can reduce the risk	60	46.1
Screening to begin at 21 years of age or within 3 years of starting sexual activity, whichever is earlier	62	47.6
Married women to be screened at least once in a	109	83.8

life time		
Every woman to be screened after 30 years of age	100	76.9
Should be screened only when there is a symptom	79	60.7
Screening to be done at least once in 3 years	96	73.8
Visual inspection of Cervix after acetic acid application can detect	53	43
Colposcopy can detect cancer cervix	62	47.6
Cervical biopsy can detect cancer cervix	119	91.5
Knowledge about Cervical Cancer acquired from Nursing Institute	87	66.9
Knowledge about Cervical Cancer acquired from the hospital attached.	73	56.2

Table 4: Attitudes among staff nurses about cervical cancer screening

S. no.	Attitudes	No.	%
1	Did not get self pap smear because no symptoms	57	43.8
2	Did not get self pap smear because felt shy	20	15.4
3	Did not get self pap smear because afraid of out come	21	16.2
4	Vaginal exam not done as no vaginal speculum	34	26.2
5	Did not take pap smear as no indication	79	60.8
6	Think pap smear is a doctor's procedure	91	70.0

When we enquired in to practices, we found that 75% of respondents agreed that they frequently performed vaginal examination and used vaginal speculum and 73% agreed that they took even Pap smear for patients and about 80% said that they refer patients for screening for cancer cervix. But it was found that only 24.6% of the respondents have themselves undergone Pap smear testing (Table 3).

Table 3: Practices among staff nurses about Cervical Cancer Screening

S. no.	Practices	No.	%
1	Examine patients by vaginal examination	98	75.4
2	Using speculum during vaginal examination	108	83.1
3	Taken pap smear for patients	95	73.1
4	Refer patients for pap smear testing	105	80.8
5	Having undergone pap smear test themselves	32	24.6

Table 5: Association of respondent's marital status and Pap smear got done on self

Marital Status	Pap smear got done on self		Total No.	%	P Value
	Pap smear not done	Pap smear done			
Married	89	32	121	93.1	0.0012
Unmarried	9	0	9	6.9	
Total	98	32	130	100	

The attitudes about Pap smear screening showed that about 70% of the staff nurses thought that Pap smear testing is a doctor's procedure. About 43.8% respondents stated that they did not get Pap smear because they had no symptom, while 15.34% stated that they fell shy to get screened and 16.2% stated that they were afraid of the possible outcome (Table 4).

All of the 24.6% of the respondents, who had themselves undergone pap smear testing, were from the married group only, so that association between respondent's marital status and pap test was statistically significant ($P < 0.05$) (Table 5)

Discussion

Cervical cancer is a common cancer among women in India and this country has largest burden of cervical cancer patients in the world. But in spite of such a large burden, we do not have any properly organized or high level opportunistic screening programmes to detect cervical cancer in them in early stages and to improve the outcome. Because cervical cancer has few subjective symptoms and progression to invasive cancer is slow, early detection of precancerous lesions by screening is important for prevention.

Nurses are the most important medical workers, who provide health education to patients and the general population and thereby help in prevention of disease and aid in health promotion. Thus staff nurses can play a very crucial role in cervical cancer screening if they are trained properly and their services are utilized in the right direction.

Hence this study was undertaken to know the awareness of knowledge related to cervical cancer and the attitude and practice of Pap smear screening among the nursing staff in Govt. General Hospital, Anantapur. In our study 86.9% of respondents knew that Pap smear can detect cancer cervix, which is comparable to the study by V Shah et al [7] where 88.4% knew and 83% of respondents knew in a study by Mutyaba et al [8]. About 33.8% of the respondents agreed that cancer cervix can present without any symptom, where as only 13.3% were aware about it in a study by Shashank et al [9]. About 76% in our study knew that cancer cervix can present as post menopausal bleeding or irregular menstrual bleeding, which is comparable to study by Shashank et al [9] where this fact was known to 69%. About 56% of the respondents agreed that cancer cervix can present as post coital vaginal bleeding, which is comparable to 46% in a study by Urasa et al [10] and 44.5% in a study by Alok Goyal et al [11].

About 82.3% of respondents also identified that cancer cervix can present with foul smelling discharge, which is comparable to 73.5% in the study by Alok Goyal et al [11] and 65.4% in the study by Ekta Singh et al [12]. The analysis of risk factors, revealed that starting sex at early age, having many sexual partners and multi parity known to 60-70% of the respondents, which is comparable to about 70% in the study by V Shah et al [7]. 76.9% of the respondents in our study, knew that HPV infection is a risk factor for carcinoma cervix, where as this awareness was noted in 54.1% in the study by Ekta Singh et al [12]. About 58.4% in our study knew about HPV vaccine, where as only 38.7% knew

about this in the study by Urasa et al [10]. When enquired in to screening practices, 47.6% in our study knew that it should begin at 21 years or 3 years within starting of sexual activity, whichever is earlier, which is comparable to 54.1% in the study by Ekta Singh et al [12]. About 76.9% thought that every woman to be screened after 30 years of age in our study, where as only to 55.5% have agreed for the same in the study by Urasa et al [10]. Cervical biopsy was known to 91.5% of the respondents in our study, which is comparable to 94.1% in the study by Shashank et al [9] and 89.5% in the study by Ekta Singh et al [12]. While VIA was known to 43% in our study, but it was known to only 14.2% in the study by Shashank et al [9]. About 47.6% knew about colposcopy in our study, but it was known to only 19.6% in the study by Ekta Singh et al [12] and 19% in the study by Alok Goyal et al [11].

When we enquired in to practices like performing vaginal examination, 75% of the respondents agreed to have practised, whereas only 53% practised in the study by Ekta Singh et al [12]. In our study about 24.6% of the staff nurses had themselves undergone Pap testing, whereas 19% in the study by Mutyaba et al [8] and 46.4% in the study by Gulertem et al [6] had undergone Pap testing. When we enquired into attitudes, 43.8% of respondents in our study stated that, they did not get pap smear because of no symptom, which is comparable to 30.5% in the study by Shashank et al [9] and 58.4% in the study by Chamraja T et al [13]. About 16.2 respondents in our study stated that they were afraid of the possible outcome, which is comparable to 15% in the study by Udigwe et al [14]. Above 70% of the respondents in our study, thought that Pap test is a doctor's procedure which is comparable to 71% in the study by Shashank et al [9] and 79% in the study by Ekta Singh et al [12]. Thus majority of the participants held a view that a Pap test is a doctor's procedure. Such an attitude that screening is to be done by a doctor or a gynecologist only, needs to be changed for the success of any kind of cancer screening program. In particular the low cost method of visual inspection after acetic acid application can be done by paramedical staff.

Conclusions

The present study concludes that the knowledge of Pap smear as a screening procedure for cancer cervix is high among staff nurses, which is encouraging and their services may be better utilized for screening, if the same level of knowledge can be imparted to staff nurses at peripheral institutions.

Though cervical cancer is the commonest cancer among Indian women, awareness regarding cervical cancer and its prevention is quite low amongst Indian women. Nurses form the majority of the health personnel and it is important that they are well educated regarding cervical cancer, due to its public health importance. Nurses have a large role to play in informing the general public and promoting preventive practices, given their influence in the society.

Hence we need to develop a cost effective screening method by training paramedical staff at primary health centre level, to screen the women from 30 years onwards, with methods like VIA etc., and to refer the women with positive result to tertiary health care centre for further evaluation by Pap smear, HPV – DNA testing and colposcopic guided cervical biopsy etc., Thus the ultimate goal of cervical pap smear screening is, to decrease the incidence of cervical cancer and subsequently decrease the mortality from invasive cervical cancer.

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