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ASSESSMENT OF KNOWLEDGE AND AWARENESS ON CERVICAL CANCER AMONG GRADUATING WOMEN IN AND AROUND WARANGAL CITY

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ABSTRACT

According to world health organization (WHO) cervical cancer among women in world is fourth most frequent type of cancer and second most frequent among Indian women. Annually lakhs of new cases are being diagnosed mostly in advanced stages. Strikingly India stands 3rd in accounting major cervical cancer deaths. This study was carried out for period of 6 months from June 2017 to November 2017 to assess the perception level of awareness and knowledge among graduating women in and around Warangal city regarding the otrocious disease, cervical cancer and causative virus human papilloma virus (HPV). A descriptive cross sectional study with the aid of self coded questionnaire-based survey was conducted involving 906 graduating respondents of various levels and out of 1050 questionnaires filled by respondents results were drawn from 906 questionnaire forms and rest 144 were excluded due to missing data. Only 31.2% (253) participants were aware of cervical cancer and only 16% of respondents reported HPV as a causative organism. 9.38% respondents were aware of Pap smear as a screening test for cervical cancer and 96 of 906 were aware of vaccination. Statistically results showed that there is significant relation between increasing age, level of education, occupation and living areas in getting aware of cervical cancer. With the study carried out in and around Warangal region a conclusion was drawn that cognizance is necessary for women of Warangal region in filling the serious breach and making them knowledgeable as poor awareness levels were marked.

KEYWORDS: Cervical cancer, Human Papilloma Virus, Pap smear, Warangal.

INTRODUCTION

A malignant growth or tumor resulting from an uncontrolled division of cells is otherwise termed as Cancer. Cervical cancer hence occurs in cells lining the cervix also called as uterine cervix. The endocervix of glandular cells and exocervix/ ectocervix of squamous cells together meet up at a place called squamocolumnar junction. (Transformation zone)- Which gradually changes over aging and after pregnancy. Roots of cervical cancer tend to develop in cells of this transformation zone. Such pre cancerous changes could be termed as cervical intraepithelial neoplasia (CIN) squamous intraepithelial lesion (SIL) and dysplasia that could be detected by Pap smear and wisely treated. Not all pre cancerous cells develop into cancer, which takes several years.

The main types of cervical cancer are squamous cell carcinoma and adeno carcinoma or have features of both called as adenosquamous carcinoma /mixed carcinomas.[1] The underlying etiology is the HPV that maybe of low risk type/high risk type of which high risk type is linked to cancer that could be transmitted through skin-skin contact. There are many clinical characteristics predisposing women to cervical cancer.[2] The pre invasive cervical cancer represents the various degrees of dysplasia where, alteration in nuclear cytoplasmic ratio, irregular hyperchromatic nuclei with marginal condensation of chromatin material and mitotic figures are found. These lesions progress with time and ultimately end up as frank invasive cancers- further develop into metaplasia. The reserve cells lying beneath the squamocolumnar junction transform into mature squamous cells known as metaplasia. Metaplastic cells sometimes are normal cells without nuclear atypia but atypical metaplasia with abnormal changes is however a precursor of dysplasia and malignancy.

Dysplasia is further graded as mild dysplasia (CIN-1) which is lately described as low-grade squamous intra epithelial lesions according to Bethesda classification in which atypical cells of undetermined significance are termed as 'Ascus'. Moderate dysplasia (CIN-II) in which 30% of CIN-II regress, 40% persist and rest progress to invasive cancer. Severe dysplasia and carcinoma in situ (CIN-III) in which nuclei are irregular, with coarse chromatin material, mitosis and multinucleate are common of which almost all progress to invasive cancer made over 10-15 years. CIN-II and CIN-III are termed as high grade squamous intraepithelial lesions (HSIL).The mode of spread of cancer is by continuity (involves vagina, parametrium and uterine body) or by lymphatic spread/ (lymph nodes of pelvis parametrical nodes, obturutor, hypo gastric and rarely distant nodes) or through vascular embolization to distant sites like lung, liver, bones, kidneys and brain.[2] Cervical cancer is staged according to FIGO staging system which is as under.

Ia- micro invasive disease (max depth 5mm, width 7mm)
Ib- clinical disease confined to cervix.
IIa- disease involves upper 1/3 vagina but not parametrium.
IIb- involves parametrium but does not extend to pelvic wall
III- disease involves lower 2/3 vagina and/or pelvic wall
IV- Involvement of bladder or distant organs.[2]

Earliest symptoms of invasive carcinoma include increasing vaginal discharge, post coital bleeding, inter menstrual or post coital bleeding, inter menstrual or post menopausal bleeding, deep lateral pelvic pain, progress to lymph edema, venous thrombosis, and sciatic nerve palsy.[3] Can be diagnosed by.

1) Routine cytological screening or Pap smear.
2) Endocervical scrape cytology by endocervical brush or curettage.
3) Incorporating HPV testing by hybridization or polymerase chain reaction.
4) Liquid based cytology (buffered methanol solution)
5) Visual inspection of acetowhite areas (VIA)
6) Speculoscopy using special disposable low intensity blue white magnifying device or loupe.
7) Spectroscopy which is a non invasive technique which probes the tissue morphology and biochemical composition.
8) Magnoscope- with magnifying lens in source enabling visualization of punctuation and mosaics.
9) Colposcopy studying cervix when Pap smear detects abnormal cells by locating areas and extent of abnormal lesion by the means of biopsy.
10) Cervicography useful when colposcopist is not available for spot evaluation.
11) Cone biopsy is adopted if abnormality is large or inner margin isn't visible.[2]

Prophylactic HPV vaccine treatment (Gardasil- a quadrivalent vaccine against HPV 16, 18, 31, 38 for adolescents, Cervarix- bivalent against HPV 16,18) and modern management of advanced cancer involves concurrent or sequential chemotherapy and radiotherapy in combination or alone respectively. Surgeries are also adopted treatment of choice based on severity. Prognosis is related to tumor volume, staging, and lymph node involvement and grading of the tissue that could be worse than squamous cell carcinoma. Raised carcino embryogenic antigen (CEA) level indicates bad prognosis. Stump cancer cervix occurs in few fallowing subtotal hysterectomy performed for benign lesions. Management is difficult involving both surgery as well as radiotherapy. Conization with external radio therapy is a recommended treatment. Palliative treatment is offered in terminal stages.[2]

Increasing awareness is important in India as no epidemic disease could be controlled without awareness and interest among public hence morbidity and mortality would be on down fall among Indian population when there is a necessary implementation of awareness programs on cervical cancer. Cervical cancer is a subject that is not freely discussed in India because of cultural taboo hence there is a requirement for information and education on awareness of cervical cancer and early detection measures.[4]

MATERIALS AND METHODS

A cross sectional study was carried out for 6 months from June 2017 to November 2017 on general public and students of Warangal district, Telangana including women willing to participate in study within age group of 12 and above, excluding patients with severe illness, memory impairment and not willing to participate whose age is below 12 years. A source of data collection form was designed to document or analyze collection information containing multiple choice questions to identify knowledge on causes, symptoms, screening methods and preventing measures of cervical cancer.

The study was approved by IHEC/TPCP/2007/001 fallowed by approach to students and general public was carried out in enrolling for study where assessment of cervical cancer awareness took place using a questionnaire further subjected to a Pearson's chi square test and logistic regression correlation analysis statistical test where p value less than 0.05 is considered significant. Study instruments adopted include patient demographic form along with general questionnaire of 35 questions divided into 3 sections and a single session interview of 20-30mins to access various parameters.

RESULTS

Majority age group of women in the study population was between 19-25 years. Less than half of the study population was aware of cervical cancer [Table-1] and only one-third of the women had knowledge about its risk factors and not even one-third had knowledge about symptoms as well as importance of screening for cervical cancer [Table-2]. HPV infection (11%), long term use of oral contraceptive pill (16.3%), weak immune system

(7.6%), and smoking (6.84%), sexually transmitted diseases (6%) were considered the major risk factors for cervical cancer. Of the symptoms of cervical cancer, irregular vaginal bleeding (6.9%), vaginal discharge (6.2%), pelvic pain (4.6%), vaginal bleeding in postmenopausal women (3.31%) were considered more frequent symptoms by the study population women. Lack of awareness and absence of symptoms were the main reason given by women for not undergoing screening. Women's education status and occupation along with the locality they live in influenced their awareness of screening [Table-3].

Table 1: Awareness of cervical cancer and its prevention in study population.

FACTORS	YES	NO
Cervical Cancer	31.23%	68.76%
Human papilloma Virus (HPV)	16.77%	83.22%
HPV vaccination	10.59%	89.40%
Pap smear Test	12.91%	87.08%

Table 2: Knowledge about cervical cancer and importance of screening for cervical cancer in studied subjects.

FACTORS	YES	NO
Knowledge of risk factors	30.36%	69.64%
Knowledge of symptoms	16.12%	84.98%
Knowledge of importance of Screening for cervical cancer	20.30%	79.69%

Table 3: Association of socio demographic characters to awareness and practice of cervical cancer screening.

Socio Demographic Characters	No. of participants with awareness n=906	OR	CI	P
1.Age ≥19 ≤18	 147/578 5/328	22.0329	8.9318-54.3506	<0.0001
2.Marital status Single Married	 145/834 7/72	1.9542	0.8781-4.3490	0.1007
3.Locality Urban Rural	 121/644 31/262	1.7240	1.1284	0.0118
4.Education level Secondary school, Intermediate, UG PG and Others	 132/834 20/72	2.0455	1.1822-3.5389	0.0105
5.Employment status Student Non-student	 141/842 11/64	0.9691	0.4939-1.9017	0.9274

DISCUSSION

The present study was carried out in majority of graduating women from UG to PG affluent to various schools and colleges in and around Warangal city in a developing country India aiming of documenting information regarding the level of awareness and knowledge about cervical cancer, HPV and attitude towards HPV vaccination. This paper establishes socio-demographic variations in terms of cervical cancer which continues to be a major public health problem for women in India. According to the findings in various studies the two major high risk oncogenic HPV genotypes are HPV16 and HPV 18. These are most commonly associated with the development of cervical cancer and are highly prevalent in India.[5-8]

Our study showed that 31.2% (253) of the women were aware of cervical cancer of which major source of knowledge was from professionals. (125 out of 253) Descriptively major findings of this study are that of all the women 71.08% (644) were from urban and rest from rural demonstrating better education and occupation was found to have significant impact on the awareness of screening as of found in several other studies that have been conducted to analyze the awareness about cervical cancer and HPV among young women, both in rural and urban areas of India.[9-13] and in other countries.[14-16] This finding is in line with other study which showed the knowledge level among female graduates in Bhutan as poor (30.1%).[17]

Few among our study population, 16.77% had heard of HPV infection as a risk factor and 10.5% knew about HPV vaccination similar to a study conducted in China where 22.1% and 13.3% of the study population had heard of HPV and HPV vaccine respectively[18] and similar study conducted in puducherry, India where, 6.5% and 2.8% of the study population had heard of HPV and HPV vaccine respectively.[19] These findings reflect the poor level of knowledge and awareness among respondents of Indian cities. It was also observed that the percentage of girls who got vaccinated was very

low (0.77%) only 7 of 906 participants which was similar with findings of study carried out in college students of Noida, India.[20]

According to our study findings, knowledge regarding pap test was present in 12.91% of respondents which was very low in controversy to findings of study carried out at tertiary health institute of Ahmadabad, Gujarat, India[21] where 88.4% of participants were found knowledgeable. Controversy findings (83%) were documented in study carried out by Mutyaba et al[22] and in a study by Ali et al[23], 20.3% knew that Pap smear is the screening test for cervical cancer.

Striking finding of our study was only 1(0.11%) out of 906 respondents underwent Pap test. Similar low result of 5% and 5.5% was documented in study carried out by V Shah et al[21] and study by Udigwe[24] respectively. The majority of the study respondents were nil known about prevention of cervical cancer including screening services for early detection. This finding is consistent with findings study by Birhanu et al[25] and reports from other countries[26-28] all our findings also proved that misapprehensions and poor awareness about the disease were common amongst respondents, which was also found consistent with reports from study by Birhanu et al and from other countries.[26]

Integrating cognizance programs with educational and clinical interventions would succor in down fall of occurrence of cervical cancer. HPV screening along with HPV vaccination would imperatively aid in controlling occurrence of cervical cancer in Indian women. But comparatively education and occupation did not have significant effect on practice of screening which was found as 5% in our study, similar association was reported by Obeichina and Mbamara in Onitsha, southeast Nigeria. This is probably because of the poor utilization of the screening services by the women, that significant difference could not be made out.

Lack of cognizance about screening services, no manifestations and detesting procedures, exposure or discussion were the common reason given by our women for not undergoing screening which is similar to the other studies conducted in India.[19,29] Few among our study population had heard of HPV infection 12.14% of which 11.3% know it as a risk factor and 10.59% 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.[18]

Even on introduction of public health programme in the name of National Cancer Control programme in India since 1975 for improving health related quality of lives of cancer patients it couldn't meet up to the expectations. This may be probably because of the poor primary health care facilities which are often under resourced and lack of qualified health care professionals.[30] In summary, our study population shows poor knowledge about cervical cancer so poor that 75.71% have no idea of HPV infection and 11.03% were not aware if HPV would occur in males or females. They were unaware of the concept of prevention or vaccination.

Finally after respondent's questionnaire filling session it was immediately followed by a 15-20 minutes informative and discussion session regarding cervical cancer from which 67.35% were willing to get HPV vaccination after knowing its importance which was a positive step towards prevention from the occurrence of cervical cancer. According to our study results of 906, 79.13% have no idea about accuracy of Pap smear test, 6.84% felt it may be 90% accurate and 5.84% thought it may be 70% accurate that means after the informative session the percentage of respondents would surely raise up hence indicating concept of cognizance sessions as an important tool in controlling disease progression.

Our study has few limitations that results on cervical cancer awareness might have been overestimated due to the fact that the questionnaire used multiple-choice questions in which limited options are available to study participants and participants can guess the answer, unlike open ended questions. As this study involves only female participants, it might have resulted in less sample size. Lastly, the questionnaire was bit long which could have caused respondents to be impatient while answering questions and may have introduced incorrect information.

CONCLUSION

Cancer being potentially fatal condition of human body which occurs as a result of bodily cell growing out of proportion, cervical cancer is one such condition that arises due to infections and cell deteriorations in and around the uterus area. Regular checkups become immensely important in early detection and treatment for such deadly persisting diseases. As cervical cancer is one of the most common cancer among women worldwide optimal cognizance among public is imperatively required. The outcome of this survey boils down to, is the alarming fact that awareness on cervical cancer is poor regardless of age, education and living standards in society which is a serious aperture to be addressed through educating women by organizing awareness programs, publishing and distributing leaflets of banes of cervical cancer and assessing the awareness levels by frequent short surveys would make drastic difference which is required in order to control the situation proven to be disastrous in coming years down the line.

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