Knowledge, Attitude and Belief regarding Cervical Cancer and its Prevention in Women attending Gynaecology OPD in a Tertiary Rural Teaching Hospital in South India

Prashant Joshi[1], Indranil Dutta[2*], Shamasnoor[3], N. Gopal[4]

{[1]Associate Professor, [3]Postgraduate Resident, [4]Professor}

Department of OBGY, Adichunchunagiri Institute of Medical Sciences, B. G. Nagara, Bellur, Karnataka, INDIA.

[2]Assistant Professor, Department of OBGY, IQ City Medical College, Durgapur, West Bengal, INDIA.

[*]Corresponding Address:

drindranildutta@yahoo.com

Research Article

Abstract: **Background:** Cervical Cancer is a cause of significant disease worldwide. Human papiloma virus (HPV) is the cause of Cancer cervix in 100% cases. Effective intervention to prevent HPV associated diseases can therefore prevent cervical Cancers and genital warts. Primordial prevention of cervical Cancer can be achieved by increasing the knowledge of the general population, especially at the rural setup as a cervical Cancer is undiagnosed up to later stage and changing the attitude of women in related to cervical Cancer. The present study was conceptualized and designed in order to assess knowledge and attitude of rural women. **Objectives:** To assess the knowledge and perceived barriers to prevention of cervical Cancer among women attending gynecology outpatient department (OPD) and to find an association between knowledge and perceived barriers with sociodemographic variables. **Material and Methods**: The present descriptive study was designed in order to access the knowledge, attitude and belief of rural women based in rural setup of B. G. Nagara. A sample size of 1000 women attending Gynaecology OPD between 25-55 years was targeted. Simple random sampling technique was adapted for the sample collection. Pre tested questionnaire were used for data collection. **Results**: The study, albeit small and simple has thrown out a gamut of realizations related to the complete lack of knowledge and awareness not only regarding cervical Cancer but also other aspects of women's health among the populations

Keywords: Cervical Cancer, Human papiloma virus (HPV)

1. Introduction

Cervical Cancer is a cause of significant disease worldwide and India[1]. In an earlier report called "Strengthening Cervical Cancer Prevention And Control" released by GAVI alliance and UNFPA[2]. It was established that 80% of cervical Cancer deaths happen in low and middle income countries. HPV is the cause of Cancer cervix in 100% cases.[3]Early age of first intercourse,multiple sexual partners, unprotected sex and sex with uncircumscribedmen, have been found to increase the risk of contracting HPV infection[4,5,6]. The prevalence and burden of cervical Cancer is much higher among women of low socioeconomic status, as well as among rural women in India[7,8]. The primary reason for this is lack of access to screening and health services, and lack of awareness of the risk factors of the cervical Cancer[9].

Perspective of a cervical Cancer in India

As per GLOBOCAN data 2002 Cancer cervix ranks as the most frequent Cancer in Indian women. In India 365.71 million women above the age of 15 are at a risk of developing Cancer cervix. 132082 women are diagnosed with Cancer cervix. 74118 women die due to Cancer cervix every year accounting for 26.7% of world wide incidence and 27% deaths worldwide. Woman in India dies due to Cancer cervix every 7 minutes accounting for more than 200 deaths every day The cumulative risk of incidence of Cancer cervix in women in India of age group 0 – 64 years is 2.4% compared to 1.3% for the world. This points out that there remain many underlying factors to be explored in order to address the prevention of Cancer in general. This argument can be safely extended to understand and strategize the prevention about control of Cancer cervix among women in India like addressing issues of knowledge and awareness regarding preventive screening, vaccination and treatment of Cancers and establishing affordable care systems and accessible preventive curative and palliative care for diagnosed cases. Effective interventions to prevent HPV associated diseases can therefore prevent Cancer cervix. Almost 80% of cases occur in low income countries. In a recently released study report on Cancer in Indian women Cancer cervix causes 17% of deaths. This study is conducted at rural college Adichunchanagiri Institute of Medical Sciences, B. G. Nagara. The studies conducted

before suggests that the huge disparity in morbidity and mortality from Cancer cervix between high and low income populations is mainly due to poor access to the facilities and hence leads to poor quality of Cancer cervix prevention and control services.

2. Methodology

The present study was designed in order to access the knowledge and attitude of rural women based in rural setup of B. G. Nagara. A sample size of 1000 women attending Gynaecology OPD between 25-55 years was targeted. Simple random sampling technique was adapted for the sample collection. Pre tested questionnaire were used for data collection. The present study was conceptualized and designed in order to assess knowledge and attitude of rural women. The data analysis was done using SPSS package for analysis, version 16. It was visualized that the findings of the study will provide a bird's eye view to the prevailing awareness levels regarding cervical Cancer in rural women. It has been assumed that by virtue of living in rural areas, they have lesser exposure and access to education, health care and information sources in general. Hence, this will enable us to make an indirect assessment of the need to formulate a large scale awareness program for cervical Cancer. It will also give us an insight into the existing preventive health seeking behavior and the willingness for the same. The outcomes from this study will hopefully point out the major areas that need to be focused in order to build a public campaign to address the cause of Cancer cervix, which is one of the leading causes of Cancer related deaths in India.

Limitations

Resource constraints restricted the researchers from taking a truly representative sample of rural women to study their knowledge and attitudes regarding Cancer cervix. Also, the researchers feel that ideally there should also have been an action component within the research, at least for IEC activities, which is again limited by the available time and personnel required.

Ethical concerns

The study mandated procedures to ensure informed consent and maximize confidentiality. Participation of all respondents in the survey was strictly voluntary and there was no monetary or other compensation offered for participation. Measures were taken to assure the respect, dignity, and freedom of each individual participating in the data collection. Participation was based on informed consent. Each individual agreeing to participate and who was able signed the consent form.

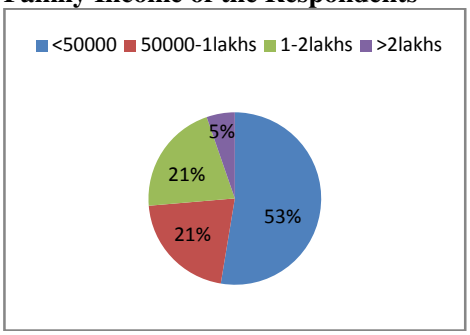
3. Findings

This survey asked respondents via multiple choice questionnaires, questions about the cervix, cervical Cancer, screening test, pap smear test, willingness to pay, perception regarding pap smear testing, HPV vaccination willingness to pay for vaccination. Questions were spread out to assess knowledge and attitude regarding both screening and vaccination.

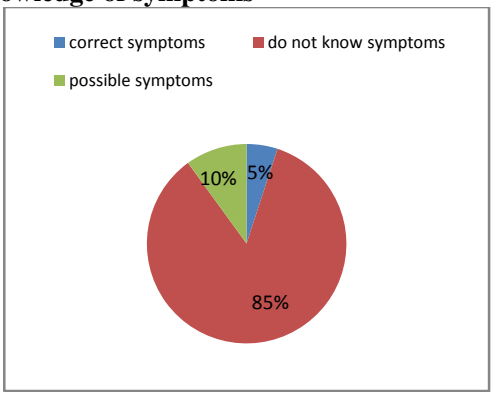
3.1 Respondent profiles

57% of the respondents were in the age group of fifteen to twenty five year Rupees. This primarily includes school and collage going students. In terms of educational qualification of the respondents, more than 20% of the respondents have received at least graduate degree. In terms of annual family income,70% of the respondents report to have an annual income less than 1 lakh.

Annual Family Income of the Respondents



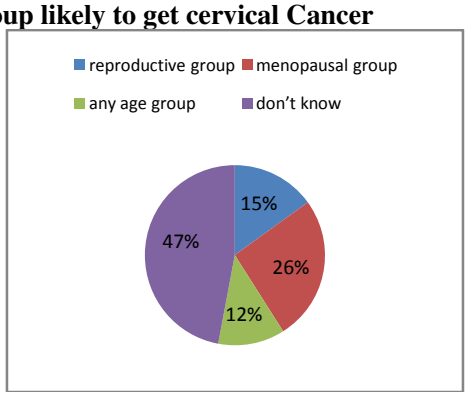
3.2 Knowledge of symptoms



Only 5% of respondents could identify the correct symptoms that a patient with cervical Cancer may show and 85% said that they do not know what could be the symptoms of cervical Cancer. of this latter group which said they do not know the symptoms, the highest number were of housewives and school students. Only 10% could identify the possible effects on cervical Cancer on a patient of these maximum women were employed and were "employed" group of the respondents. When asked about the age group most likely to get cervical Cancer, only 26% said that it is menopausal age group. Most of the respondents47% did not have any information on

likely age group and 15% sat that it happens in the reproductive age group and 12% any age group.

Age group likely to get cervical Cancer

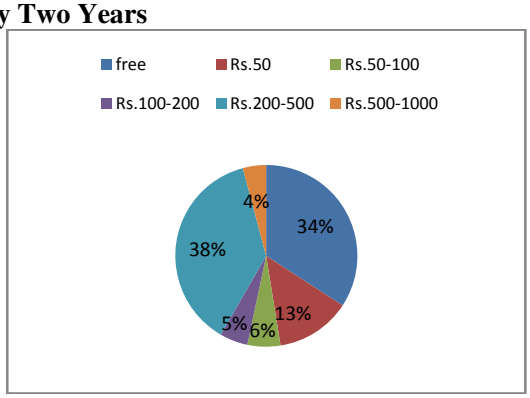


Knowledge and Attitude towards Screening Test

This section of the study started by asking the respondents if they know what is a screening test. Equal responses were received for choosing the correct definition from the given options and for opting for "don't know". However, in response to the next question, 15% of the respondents said that they have heard about a pap smear test. Of these 15%, the highest proportion was of employed women. Consequently, this was also the category that had the maximum number of affirmative responses for ever having taken a pap test . Interestingly, in 5%of the cases the pap test was self prescribed. The amount paid for the test ranged between 100 to Rupees 200.Two respondents said the test was for free. When asked how much is a respondent willing to pay for screening test most of them say that it should be within Rupees1000.Around 50% respondents of this hold some kind of health insurance.A burgeoning number of respondents 62% say that they do not know how much they are willing to pay for a routine pap test. Only 20% respondents perceive pap test to be safe,as against being risky and painful. On being asked if a healthy adult women should have a pap test every two years, maximum responses are registered as "cannot say.while 33% of respondents agree, 29% disagree.

Question	Respondents
Know screening	17
Know pap test	15
Had pap test	3
Pap test is safe	3
Pap test in every two yrs for adult	2

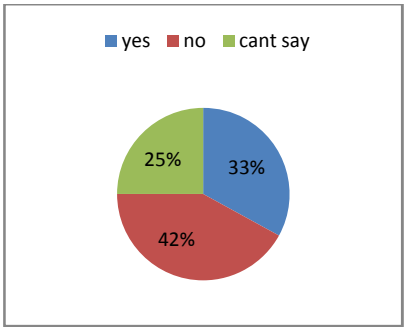
How much You are Willing to Spend on Pap test Every Two Years



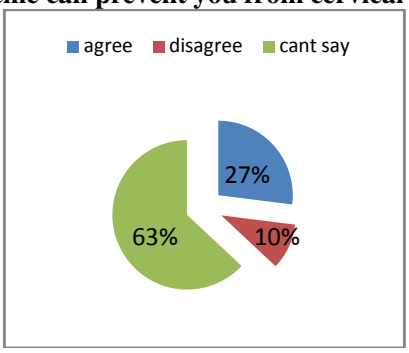
Knowledge and attitude towards HPV vaccination

83% do not know anything about the HPV vaccine. 63% can't say if HPV vaccine can prevent them from cervical Cancer. 32% would like to take HPV vaccine as a preventive measure against cervical Cancer. Similarly, only 33% say that they would like to take the vaccination as a preventive measure against cervical Cancer but 42% can't say if they would like to do so. Most of the respondents (30%) are willing to spend within Rupees 1000 to get the vaccination. One fourth have health insurance. 92% of respondents do not know where HPV vaccine is available, while 13% say that it is able in private clinics, Government health facilities and in medical stores.

Would like to take HPV vaccination as prevention against cervical Cancer



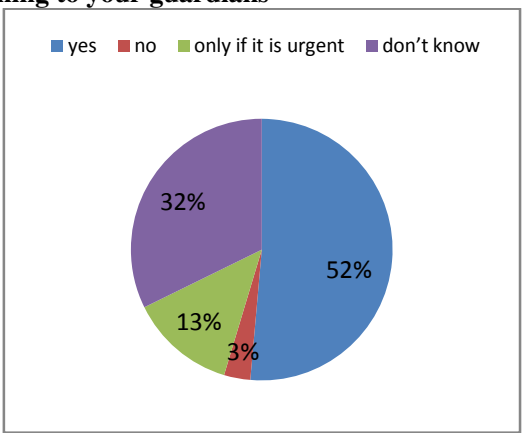
HPV Vaccine can prevent you from cervical Cancer



Decision making environment

The study employed two general questions to know how conducive is the decision making environment which would influence the behavior of the women regarding issues related to screening test for cervical Cancer and other reproductive and women's health issues in general. On being asked who decides in the family when to see a doctor, 40% said that the decision making is done according to the situation in hand and 35% said that they themselves decide when to seek medical care. It was also asked if they would be comfortable in talking about Cancer screening to their guardians (or at home), to which 51% respondents answered in affirmative. However, 13% said they would do so only if it was urgent and 32% said they don't know.

Will you be comfortable in talking about Cancer screening to your guardians



4. Discussion

The key conclusion from the study can be summarized by stating that the knowledge and awareness regarding cervical Cancer and HPV vaccination is generally low. However there is mildly favorable decision making and attitudinal environment regarding regular screening, moderate paying capacity and positive perceptions about the HPV vaccination to prevent cervical Cancer among the studied group. Beliefs and practices of preventive health seeking behavior primarily assessed through the respondents knowledge and perception regarding Cancer screening (pap testing) are not based on any concrete evidence or information. This might be because of a complete absence of information, education and communication regarding cervical Cancer and Cancer screening in public health programs and low level of socializing factors related to spread of information and influencing attitudes towards the same. Knowledge about linkage between HPV and cervical Cancer and hence, HPV vaccine and cervical Cancer is also absent in half of the responses. The peak incidence of HPV occurs between the ages 16 and 20 yrs, after the first sexual intercourse. The natural history pf HPV infection coupled with the ability to clinically access the cervix makes cervical Cancer the most preventable and treatable of all types of Cancer. The dual application of primary and secondary prevention strategies offers an opportunity for comprehensive control of this Cancer[10]. There is higher incidence of Cancer cervix in developing countries than the developed countries. Sub-Saharan Africa has the highest incidence where as India has the highest number of cases. The frequency of screening and HPV infection are the strongest determinants of the international differences in the Cancer cervix incidence. In low income countries, middle aged women have at least as many as HPV infections as young women, mainly because of variations in the age specific sexual behavior of the women and their partners[11]. Socioeconomic differences in cervical Cancer risk seem to be explained not by differences in HPV prevalence but rather by factors that affect the natural history of HPV infection (e.g. early age at first sexual intercourse and child bearing, and high parity).immune impairment due to HIV infection also leads to many fold increases both in the burden of HPV infection and in the already existing lack of adequate screening for cervical Cancer. It is important to note the above observations to perhaps extend this study to a rural, marginalized population to produce even clearer results on the ignorance of cervical Cancer and the need for extensive IEC and screening programs. As of now there is no HPV vaccination available in the public health facilities in India. HPV vaccination needs to be introduced with the right mix of economic and strategic planning to reach out to the maximum number of girls in the most affordable manner. The study reveals that 62 % of the participants are undecided if they want to take the vaccination or not. Moreover, out of those who responded to how much are they willing to pay for the vaccination, 30% (the maximum in a single category) said they would be able to spare anything within a 1000 Rupees for it. In this regard, several models of economic evaluation indicate that HPV vaccination in low and middle income countries where quality screening is not wide effective if the cost per vaccinated girl (including 3 doses of vaccine and program costs) is less than US$ 10-25 [12]. A phased approach meant to be scaled up with time might be good idea for India, with a package that included adequate provisions for sexual and reproductive health education. We can examine South Africa's example to suit our requirements, as the country has a weak public health structure and is resource poor, which is comparable to Indian situation. Availability of HPV vaccine in the private sector has put pressure on the public health system to take up the same. A planning process in this regard has initiated, focusing on the following:

- Organization of the planning team with the establishment of three working groups:(1) HPV vaccine ;(2) Screening and (3) Treatment and care ;
- Research (1) acceptability and feasibility of introducing HPV vaccine in 4 provinces ;(2) Messaging and packaging of services; (3) HIV or HPV interface, and (4) modeling and cost effectiveness.

A cervical Cancer-prevention and control program should be strengthened when considering the vaccine introduction, first in its own right and second as delivery of HPV vaccines may increase the demand for screening as a result of population based information for mothers of the target population for HPV vaccines.

Conclusion

Any public health problem cannot be solved in isolation. The solution has to be comprehensive in its vision and take into account the multiple variables apart from the clinical and socialepidemiology of the particular condition; such as the economic readiness and political will of the policy makers of the concerned region regarding the disease/problem. In India, the HPV vaccination trial by, path has been stalled. The future of the trial is unclear as of now. Similarly, screening program for cervical Cancer is nowhere on the national public health policy priorities. The Government of India has already launched a National Cancer Control Program long ago in 1975. With a prime focus on early detection and primary prevention. The program highlights the need for IEC and community outreach for fulfilling this purpose, however the implementation is hard to see. National Programme for prevention of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS) will be launched across the nation under the purview of the 12th Five Year Plan[13]. This is, hence, a good time to come out with evidence that stresses the need for the following:

a) Health education.

b) Behavior change communication regarding preventive care seeking.

c) Setting up primary prevention facilities.

d) Plan and strategize for and extensive screening program and

e) Deliberate on the possibility of introduction of the HPV vaccination

As a conclusion to this study, the researchers would like to highlight the need for serious climate building for taking up cervical Cancer on a priority basis. Collaborations between the public and private sector might be helpful in setting up early detection and primary prevention systems. Incentive based systems might prove useful to lure private practitioners in reaching out and conducting regular screening for cervical Cancer among patients. The study, albeit small and simple has thrown out a gamut of realizations related to the complete lack of knowledge and awareness not only regarding cervical Cancer but also other aspects of women's health among the populations. It may be extrapolated to say that any women's health program that is currently running in the public health system is not very effective. Moreover, as we know, the Iow level of utilization of public health facilities among the city based, educated, middle class population renders the reach of these programs very limited. On the other side of the coin, there is an absence of "counseling" practice among the clinical practitioners on a comprehensive basis for catering to problems other than the immediate (what the patients present themselves with). While this view may be debated in a larger context, it is suitable in the context where proactive counseling might lead to successful preventive care seeking and early detection and management of a number of avoidable infections and prolonged clinical conditions that may not show symptoms in early stages.

References

1. Prabhat Jha et al(for the million death study collaborators) (2012). Cancer mortality in India: a nationally representative survey. The lancet; early online publication, 28 march 2012.DOI: 10.1016/S0140-6736(12)60358-4.
2. Strengthening cervical Cancer prevention and control: report of the GAVI-UNFPA-WHO meeting (2009) geneva Switzerland; WHO/RHR/10.13.
3. Kaufmann AM, Schneider A (2007). New paradigm for prevention of cervical Cancer. Eur J. Obstetgynecol report boil;130:25-29.
4. Price JH, Easton AN, Telljohann SK, et al (1996).perceptions of cervical Cancer and pap smear screening behavior by women's sexual orientation. J Com Hlth, 21,89-105.
5. Ralston DJ, Taylor VM, Yasui Y et al(2003).Knowledge of cervical Cancer risk factors among Chinese immigrants in Seattle. J Com Hlth,28,41-57.
6. Shankaranarayanan R, Nene BM, Shastri SS, et al(2009).HPV screening for cervical Cancer in rural India. N Engl J Med, 360,1385-94.
7. Kurkure AP, Yeole BB (2006).social inequalities in Cancer with special references to South Asian countries. Asian Pac J Cancer Prev ,7,36-40.
8. VallikadE(2006). Cervical Cancer: the Indian perspective. FIGO 6th annual report of the results of treatment in gynaecological Cancer. Int J Gynecol Obstet , 95 Suppl 1, S215-33.
9. Ambika Satija, cervical Cancer in India, Center for chronic disease control. Retrived on april 5th 2012 sancd.org/uploads/pdf/cervical_Cancer.pdf.
10. Broutet N. Interventions for encouraging sexual behaviours intended to prevent cervical Cancer (last revised; 1 april 2012). The WHO reproductive health library; geneva: world health organization. Retrieved on 15 april, 2012 from

http://apps.who.int/rhl/gynaecology/Cancer/cd001035_broutetn_com/en/index.html

11. Strengthening cervical Cancer prevention and control: Report of the GAVI-UNFPA-WHO-Meeting (2009) Geneva, Switzerland; WHO/RHR/10.13.
12. Strengthening cervical Cancer prevention and control: Report of the GAVI-UNFPA-WHO-Meeting (2009) Geneva, Switzerland; WHO/RHR/10.13. Express News Service (2012, april 20).
13. Anti Cancer program to be implemented in 12th 5 year plan, Indian express. Retrieved from http://www.Indianexpress.com/news/-anti-Cancer-programme-to-be-implemented-in-12th-five-year-plan-/939103/
14. Operational guidelines: National Programme For Prevention of Cancer, diabetes, cardiovascular diseases and stroke (NPCDCS), Directorate general of Health Services Ministry of Health And Family Welfare, Govt. of India.