Available online on 15.12.2019 at http://ajprd.com

Asian Journal of Pharmaceutical Research and Development

Open Access to Pharmaceutical and Medical Research

Open Access

Review Article

Review of Cervical Cancer Preventive and Screening Strategies in India

Devi Meena *, Subhash Chand, Deovrat Kumar

College of Pharmacy Roorkee, Uttarakhand, India.

A B S T R A C T

Cervical cancer (CC) rapidly spread in the women. CC is the cancer which start from the cervix this is the 1st stage and 3rd most common type cancer in women's worldwide. Continuously, Human papillomavirus (HPV) infection is the higher&strongest epidemiologic risk factor for CC.HPV-16 and HPV-18, these are type virus with high-risk HPV types. But at present many types of techniques available as – Pap smear test, Colposcopy, HPV virus test/detection, Visual inspection of cervix with 5% acetic acid, and Visual inspection of cervix with Lugol's Iodine.The majority of diagnosis with CC will be analyzed more than 13000 and rate of death 4000 with women in United States and it also deadline disease in India. It is one of the cancer which is preventable. This article studied with in PubMed and Google scholar, studies about cervical cancer from Wikipedia and you-tube also. And it is only meta-analysis or multi-institutional, review article and research studies were considered for analysis of cervical cancer. The most important risk factor is determined with human beings Human papillomavirus (HPV) which traditional in worldwide. This is the type of cancer which is screening and detect in the early stage by the screening methods. In this article, abstracted published studies about to year between during 1995-2018 which has been carried out in worldwide on CC with significance on screening test methods. Basically, Pap smear is the method of screening for cytology but now a day many studies have been accomplish to investigate different methods as well as visual inspection method.

Keywords: Cervical Cancer screening, HPV, Screening methods, Pap Smear test, India United State.

A R T I C L E I N F O: Received 20 July. 2019; Review Completed 15 Sept. 2019; Accepted 25 Oct. 2019; Available online 15 Dec. 2019

Cite this article as:

Meena D, Chand S, Kumar D, Review Article of Cervical Cancer Preventive and Screening Strategies in India, Asian Journal of Pharmaceutical Research and Development. 2019; 7(6):77-80, **DOI:** http://dx.doi.org/10.22270/ajprd.v7i6.590

***Address for Correspondence:**

Devi Meena, College of Pharmacy Roorkee, Uttarakhand (India)

INTRODUCTION:

Cervical cancer (CC) rapidly spread in the women. CC is the cancer which start from the cervix this is the 1st stage and 3rd most common type cancer in women's worldwide and 7th overall.

The majority of more than 85% globalization countries, whereas 13% female with cancers.

In US Country CC is exposed fordeaths in 2008, in other countries about 88% of which occur in develop - in Africa, Latin America,Caribbean, and Asiasuggested by Globocan[1,] but, CC is preventable disease, and much application should be done to prevent CC. Human papillomavirus (HPV) infection is the higher & strongest epidemiologic risk factor for CC associated with cancer of cervix, neoplasia [2,3]. According to World Health Organization (WHO), primary prevention through HPV vaccination is achieve approval in cost-effective countries and has been recommend by the vaccine knowledge/awareness, approach, and use are very low [4, 5].

Basically HPV transmitted through the sexual contact with more than 2 or three person. There are 2 HPV-16 and HPV-17 cause 70 to 80 % of cervical cancer in the women's. Generally women died from CC because of their financially problems. All-inclusive CC can be controlled trough the primary prevention, Secondary prevention and tertiary prevention and CC can be cured if the diagnosed in the beginning.Juneja A et al suggested that concerns with the control of CC accession based on primary and secondary prevention, analysis severe risk factors associated with CC. According to the information of national cancer registry

programme (NCRP), this type of cancer of uterine and breast are leading cause of malignancies which is seen in India [6].

MATERIALS AND METHODS:

This article studied with in PubMed and Google scholar, studies about cervical cancer from Wikipedia and you-tube also. And it is only meta-analysis or multi-institutional, review article and research studies were considered for analysis of cervical cancer. And the review literature carried out for study period 1995-2018. Articles search using the main key like- hospital, prevention, cervical cancer, rural and community based.

RESULTS AND DISCUSSION:

The total no. of 251 article were published in the whole world on various aspects of CC. This article is based on those who studies were hospital based studies. This study focus on the cure, prevention of CC in the early stage. If I talk about in India there are 1/5th occurrence CC of the world, maximum cases with 100000 cases diagnosed in every 1 year [7]. According to age specific the incidence rate for CC disclose that this disease increase from age between 25 to 60 years. In India it is the most common cancer found in women and there are no more any valuable screening test or method available. Women not aware about this disease. Broadly the risk factor now well traditional to be determined infection with the high risk oncogenic or malignancy, the type of HPV. About eighty percent lady screened by the health facility in advance stage of the diseases.

Into this article published studies divided into 2 phase: one of those who published before 1990s/1995 so that is the fact which was focus of the studies in these 2 periods [8]. In the 1st phase focus on the difficulty with the disease, risk factors of the disease and screening method with the Pap smear screening test this studies reflected the changes in the awareness of HPV in the causation of CC & this technique also new screening strategies/methods.

Epidemiology:

The majority of risk factor into this study, less awareness, lack of knowledge CC showed in the world in any race. The risk factor like as- low educational status, marriage in early stage, poor genital hygiene, abnormal menstruation and sexual relationship more than 2 person, these data search from Bombay, Assam, Calcutta, Pune, Patna and Trivandrum (7, 8, 9, 10, 11, 12) and U.S.

In the 2004, data estimation shows that 12,608 incident CC [14].

Cervical cancer control: A comprehensive approach [15].

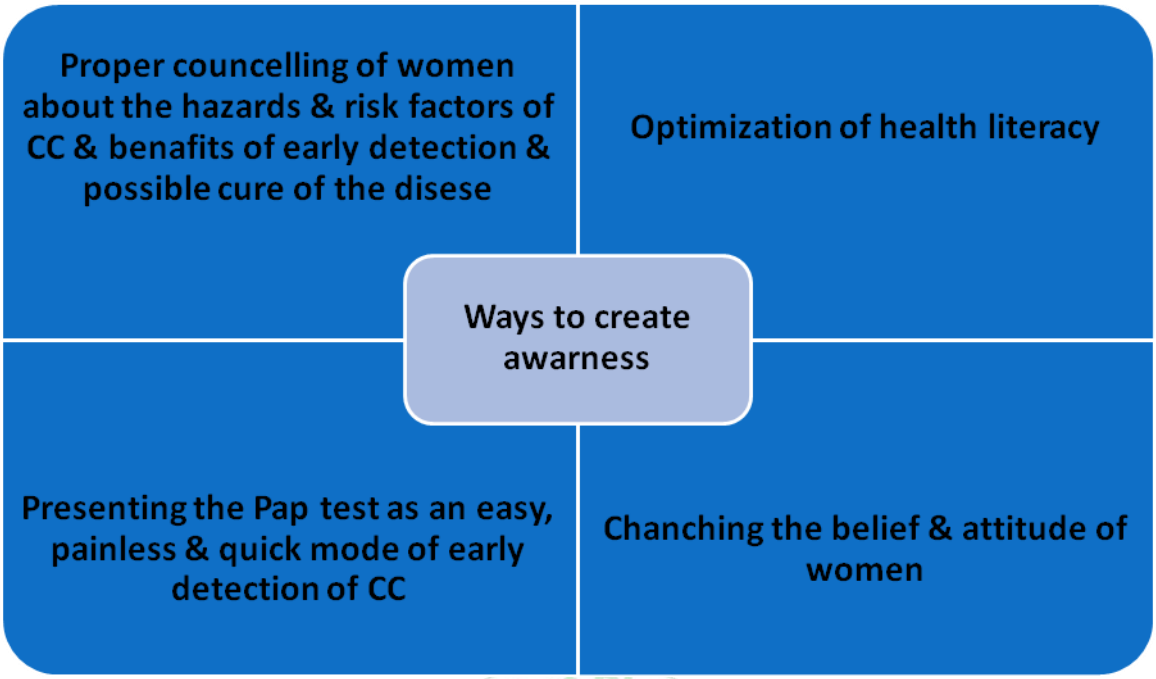
This study shows that primary prevention start with HPV vaccination into the girls before become sexual active age [9-14].

Primary prevention	Secondary prevention	Tertiary prevention
Girls 9-14 years	Women 30 years old or older	All women as needed
HPV vaccination		
Girls and boys, as appropriate	"Screen and treat" - single visit approach	Treatment of invasive cancer at any age and palliative care
Health information and warnings about tobacco use	Point-of-care rapid HPV testing for high-risk HPV types	Surgery
Sex education tailored to age and culture	Followed by immediate treatment	Radiotherapy
Condom promotion and provision for those engaged in sexual activity	On-site treatment	Chemotherapy
Male circumcision		Palliative care

Management of interfering the Cervical Cancer:

If any women at presents have a doubt related her health problem for CC, she must besuitable facility for further diagnosis, treatment and evaluation. Some of the symptoms given as below:

Symptoms of early stage cervical cancer may include	As cervical cancer advances, more severe symptoms may appear including
Irregular blood spotting or light bleeding between periods in women of reproductive age	Persistent back, leg and/or pelvic pain
Postmenopausal spotting or bleeding;	Weight loss, fatigue, loss of appetite
Bleeding after sexual intercourse	Foul-smell discharge and vaginal discomfort
Increased vaginal discharge, sometimes foul smelling	Swelling of a leg or both lower extremities



Melikian AA et al study suggest that cervical mucus of smokers include determinable amount of cigarette comprise and their metabolism like as well as benzo-a-pyrene [BaP] [16]. derivatives of nitrosamines 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone) [17]. Benzo-a-pyrene is up regulation of HPV. And they suggest that genome elaboration may increase the probability of viral DNA unification into the host genome, milestone in the development of cervical cancer [18]. This study also suggest that smoke may also play a big role of the cancer, avoid smoking.

But many time psychological factors like as- anxiety, fear, and much pain that means consult with your doctor or physician. This type of symptoms play also a big role. Many time some women's fail undergo the screening test due to many factors as- lack of knowledge, lack of resources, difficulty to about her disease, feel like guilt, and some time they not to screen because of financial problems, and lack of family support so they no active involvement of community. Women phase many types of psychological problems like- ghabrahat, anxiety, don't talk to any other, phobia and others.

CONCLUSION:

The first one thing is that, what is needed primary and secondary prevention of CC in the world because this disease survive enormous challenge and we have to need primary & secondary prevention by the health education and screening. Cervical cancer is the 3rd most common type of cancer in women. After all, this screening method will successful if by Human health agency and according to WHO supported by proper way/referral. Women have not aware from this cervical cancer, so that knowledge, prevention, screening method and awareness levels of CC reach to the women. The most important risk factor is determined with human beings Human papillomavirus (HPV) which traditional in worldwide. But WHO has also grown the guidance that how you can prevent and control to the cervical cancer this prevention and control through the screening, vaccination and management of intrusive.

REFERENCES:

1. Balaha MH, Al Moghannum MS, Al Ghowinem N, Al Omran S. Cytological pattern of cervical Papanicolaou smear in eastern region of Saudi Arabia. Journal of Cytology/Indian Academy of Cytologists. 2011; 28(4):173.
2. Bosch FX, Lorincz A, Muñoz N, Meijer CJ, Shah KV. The causal relation between human papillomavirus and cervical cancer. Journal of clinical pathology. 2002; 55(4):244-65.
3. Walboomers JM, Jacobs MV, Manos MM, Bosch FX, Kummer JA, Shah KV, Snijders PJ, Peto J, Meijer CJ, Muñoz N. Human papillomavirus is a necessary cause of invasive cervical cancer worldwide. The Journal of pathology. 1999; 189(1):12-9.
4. Jacob M, Mawar N, Menezes L, Kaipilyawar S, Gandhi S, Khan I, Patki M, Bingham A, LaMontagne DS, Bagul R, Katendra T. Assessing the environment for introduction of human papillomavirus vaccine in India. The Open Vaccine Journal. 2010; 3(1).
5. Madhivanan P, Krupp K, Yashodha MN, Marlow L, Klausner JD, Reingold AL. Attitudes toward HPV vaccination among parents of adolescent girls in Mysore, India. Vaccine. 2009; 27(38):5203-8.
6. Takiar R, Srivastav A. Time Trend in Breast and Cervix Cancer of Women in India–. Asian Pacific Journal of Cancer Prevention. 2008; 9:777-80.
7. Patro BK, Nongkynrih B. Review of screening and preventive strategies for cervical cancer in India. Indian journal of public health. 2007; 51(4):216.
8. Patro BK, Nongkynrih B. Review of screening and preventive strategies for cervical cancer in India. Indian journal of public health. 2007; 51(4):216.
9. Jussawalla DJ, Yeole BB. Epidemiology of cancer of the cervix in greater Bombay. Journal of surgical oncology. 1984; 26(1):53-62.
10. Das RK, DGO M. Cancer cervix in Assam. J ObstetGynaecol India. 1970; 20:234-9.
11. Dutta PK, Upadhyay A, Dutta M, Urmil AC, Thergaonkar MP, Ganguly SS. A case control study of cancer cervix patients attending Command Hospital, Pune. Indian journal of cancer. 1990; 27(2):101-8.
12. Mishra NK, Sinha TK. Cytologic screening for the detection of cancer in the uterine cervix—a survey in Patna (India). Cancer letters. 1990 30; 52(1):21-7.
13. Varghese C, Amma NS, Chitrathara K, Dhakad N, Rani P, Malathy L, Nair MK. Risk factors for cervical dysplasia in Kerala, India. Bulletin of the world Health organization. 1999; 77(3):281.

14. Nandakumar A, Gupta PC, Gangadharan P, Visweswara RN, Parkin DM. Geographic pathology revisited: development of an atlas of cancer in India. International journal of cancer. 2005; 116(5):740-54.
15. Zendehdel K. Cancer statistics in IR Iran in 2018. Basic & Clinical Cancer Research. 2019; 11(1):1-4.
16. Melikian AA, Sun P, Prokopczyk B, El-Bayoumy K, Hoffmann D, Wang X, Waggoner S. Identification of benzo [a] pyrene metabolites in cervical mucus and DNA adducts in cervical tissues in humans by gas chromatography-mass spectrometry. Cancer letters. 1999; 146(2):127-34.
17. Prokopczyk B, Cox JE, Hoffmann D, Steven E SE. Identification of tobacco-specific carcinogen in the cervical mucus of smokers and nonsmokers. Journal of the National Cancer Institute. 1997; 89(12):868-73.
18. Alam S, Conway MJ, Chen HS, Meyers C. The cigarette smoke carcinogen benzo [a] pyrene enhances human papillomavirus synthesis. Journal of virology. 2008 Jan 15; 82(2):1053-8.