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An observational study of the demographic features and the risk factors of cervical and endometrial cancer

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Abstract

Background: Gynecological cancer is any cancer that starts in women reproductive organs. Over 75% of such women report in India for diagnosis and treatment at advance stage leading to high mortality rate. Cervical cancer is a preventable disease, and regular Pap smears have long been used in developed countries to screen for cervical cancers, accounting for their low-incidence rates. Unfortunately, in developing nations such as India, due to lack of awareness programs and no formal screening programs, most women have presented in the advanced stages of cervical cancer.
Aim: The aim of the study was to find out the demographic features and factors which may be playing role in pathogenesis of cervical and endometrial cancers and prevention, early diagnosis and screening and thus timely intervention of these cancers.
Methods: It is an observational study carried out on 100 indoor cancer patients admitted in Zenana Hospital, Jaipur in a 24 months period from May 2016 to November 2017.
Result: Ca cervix was most prevalent in Hindu women of low socio-economic status in rural areas, while Endo-metrial cancer comparatively occurred in urban population. The patients were mostly from the outskirts of Jaipur and nearby areas and lesser proportion belonged to the urban population. This study revealed an increasing incidence of carcinoma of the cervix with increasing parity.
Conclusion: From this study it is evident that both cancer cervix and cancer endometrium have plenty of high risk conditions, environmental influences and unhealthy lifestyle habits associated with them. Thus identifying these high-risk factors, mass education on cancer awareness amongst the people and information regarding screening tests available can be done.

Keywords: Gynecological cancer, cervical cancers, endometrial cancers.

1. Introduction

A disease that thrives on ignorance, fear and delay i.e. cancer is the most important health problem of our society. There are 2.5 million cases of cancer in our country and nearly 400,000 deaths occur due to cancer. Every year in India, 122,844 women are diagnosed with cervical cancer and 67,477 die from this disease. [1] Gynecological cancer is any cancer that starts in women reproductive organs. Over 75% of such women report in India for diagnosis and treatment at advance stage leading to high mortality rate. Out of all the gynaecological cancers most common is the cancer of cervix. Cervical cancer is a preventable disease, and regular Pap smears have long been used in developed countries to screen for cervical cancers, accounting for their low-incidence rates.

Unfortunately, in developing nations such as India, due to lack of awareness programs and no formal screening programs, most women have presented in the advanced stages of cervical cancer. Similarly endometrial cancer is known to be associated with certain metabolic factors. The metabolic syndrome is a cluster of risk factors including

obesity, hypertension, insulin resistance, and dyslipidemia and is associated with an increased risk of cardiovascular disease [2]. Study of "Risk Factors" rather than "Causes" acknowledges the modern concept that the cancer results from probabilistic interplay of many factors. The study is undertaken to evaluate the stages in which patient comes for treatment, symptoms promoting them to seek advice and then to correlate various etiological factors. Hence, this study aims to know something about the causes of these two cancers when we come to understand the mechanism by which the major risk factor acts. This can help in primary prevention and secondary prevention of these cancers thereby reducing the morbidity associated with them.

1.1 Aims and objectives

To find out the demographic features and factors which may be playing role in pathogenesis of cervical and endometrial cancers. To aid the prevention, early diagnosis and screening and thus timely intervention of these cancers.

2. Material and methods

It is an observational study carried out on 100 indoor cancer patients admitted in Zenana Hospital, Jaipur in a 24 months period from May 2016 to November 2017.After the informed consent general history taking and examination done and relevant information regarding age of diagnosis, menarche, marriage, first intercourse, parity, number of abortions extracted. Presenting complaints, diagnosis and histopathology reviewed. Treatment instituted to these patients and follow up of the patients was done. In the last counseling of patients done about the causes of cervical and endometrial cancer and risk factors associated with it

3. Observation

Table 1: Evaluation of various Risk factors of cervix and endometrial cancers

	Cervix	Endo-metrium
Distribution	75.2%	27.5%
Average age at presentation	68	52
Avg. age at menarche (yrs.)	12.6	12.5

	Cervix	Endo-metrium
Dominant Religion Hindu Muslim	 95.20% 4.80%	 88% 12%
Rural Urban	85.30% 14.70%	24% 76%
Socioeconomic Class I to II III to IV	 4% 96%	 72% 28%
Most common Complaint	Ab. Vaginal discharge (49.7%)	Post men-bleeding (56%)
Av. Age at marriage/coitus	16.4	18
Av. Parity	4.28	3.32

Table 2: Association of STI with cervical cancer

Symptoms	Ca cervix
Abnormal vaginal discharge	49.7%
Lower abdominal pain, dyspareunia	30.8%
Genital ulcer	13%
History of warts	17.1%
Test for HPV Positive = 4.1% Negative =0.3%	

Table 3: Relation of endometrial ca with metabolic syndrome

	Endometrial cancer no of cases
BMI>30	87
BP>130/85 mmhg	76
Triglycerides>150 mg/dl	56
FBG>100 mg/dl	58
HDL<50MG/DL	44

4. Results

CA Cervix was the more common malignancy in female genital tract in the developing countries.[3] Saleye-Fubara D *et al* conducted a similar study in Port Harcourt where cervical cancer constituted 65% of primary female genital cancers. [4] Pindiga, *et al*. in a study reported that cancer of cervix accounted for 72.6% of all female genital cancers. [5] Most cases of both the cancers belonged to 50 - 60 yrs of age group. This is similar to a study done by Edington GM. [6] Ca cervix was most prevalent in Hindu women of low socio-economic status in rural areas. While Endo-metrial cancer comparatively occurred in urban population. The patients were mostly from the outskirts of Jaipur and nearby areas and lesser proportion belonged to the urban population.

This study revealed an increasing incidence of carcinoma of the cervix with increasing parity. This agrees with results of study done by Anya SE *et al*. [7] Poor genital hygiene, history of STI's were significantly associated with genital malignancy in our study. Cervical cancer, although a chronic disease of sexually active women, is the product of infection, poor hygiene, poverty, high parity and malnutrition. [8]

High parity, poverty, poor sexual hygiene, never schooling, multiple sexual partners, tobacco smoking, co-infection with human immunodeficiency virus, Herpes simplex virus type 2 and Chlamydia trachomatis, immunosuppression, oral contraceptive use and dietary

deficiencies of vitamin A are all co-factors that are necessary for progression from cervical HPV infection to cancer. [9]

BMI, diabetes, hypertension and obesity showed significant association with endometrial cancer. Thus metabolic syndrome and most of its individual components (BMI, glucose and triglyceride concentrations, and hypertension are important contributors in the development of endometrial carcinoma.

More importantly, the risk increased with the number of metabolic alterations present. These observations are strikingly reminiscent of the results of recent well-designed prospective studies. [10] Among the individual metabolic syndrome components, obesity is the most powerful correlate of cancer risk. In our data, BMI was the strongest single predictor of risk. In addition, glucose concentration and hypertension were significantly associated with risk (after accounting for BMI)-observations consistent with the reports from most large epidemiologic investigations.

5. Conclusion

From this study it is evident that both cancer cervix and cancer endometrium have plenty of high risk conditions, environmental influences and unhealthy lifestyle habits associated with them. Thus identifying these high-risk factors, mass education on cancer awareness amongst the people and information regarding screening tests available can be done. This can help immensely in primordial and primary prevention of the disease. Apart from this it will also help in down staging the disease, early diagnosis and thus better prognosis of carcinoma cervix and endometrial cancers.

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