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IMPACT OF AGE ON CERVICAL CANCER AND ITS PREVALENCE AMONG OTHER DREADFUL CANCERS IN WOMEN: A CASE REPORT

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ABSTRACT

Cervical cancer is the fifth most common cancer in humans, the second most common cancer in women worldwide and it is the most common cancer which causes death in the developing countries. The reasons can be attributed due to unprotected sexual contact, poor diet, lack of knowledge, age factor, obesity, radiation and HPV (Human papilloma virus) are the main reasons for cervical cancer .Here in this case study 250 cases of female patients were studied and observed for the prevalence of cervical cancer when compared with the prevalence of other cancers like Breast cancer, Ovarian cancer, Gastric cancer. We also discussed about the influence of age on the occurrence and determinant of cervical cancer in observed cases and finally the stage of cervical cancer at which the patient exhibits symptoms and diagnosis were considered.

KEYWORDS: Cervical cancer, ovarian cancer, Gastric cancer, Obesity, Radiation, Human papilloma virus.

INTRODUCTION

Cancer (malignant neoplasm), is a large, heterogeneous type of syndrome in which a group of cells shows uncontrolled growth and invasion that forces upon and destroys nearby tissues, and often metastasizes, the tumour cells spread to other locations in the body through the lymphatic system and the bloodstream.[7] Cancer is primarily a dreadful disease may be caused due to many reasons, though genetics influence the risk of some cancers, Some of the common factors leading to cancer may include the following like

- Un protected sexual contact,
- use of tobacco ,
- Poor diet ,
- Obesity,
- Infection,
- Radiation,
- lack of physical activity, and
- Environmental pollutants.

These environmental factors cause or enhance abnormalities in the genetic material of cells. Most cancers can be treated, by the following methods like Chemotherapy, Radiotherapy and Surgery. The prognosis in cancer cases can be greatly influenced by the type and location of the cancer and the extent of stage of the disease.

In India we have a population of approximately 365.71 million women above 20 years of age, who are at risk of developing cervical cancer.[5] The current estimation indicate approximately 132,000 new cases diagnosed and 74,000 deaths annually in India. HPV (Human papilloma virus) 16 and HPV (Human papilloma virus) 18 are the serotypes which account for nearly 76.7% of cervical cancer in India.[8, 10] We can see more than 85% of the global burden of cervical cancer cases and 88% of cervical cancer deaths in developing countries. Indian contributes about 25.4% to cervical cancer cases and contribution to the mortality due to this disease is 26.5%. It has been estimated that there will be around 20, 5496 new cases and 11,9097 deaths due to cervical carcinoma by 2020 in India.

The American Cancer Society recommends the following[1, 2]

Table1: Showing the precautionary measure for prevention of cervical cancer in women

Women age/ condition	Recommendations
Age between 21 and 29	Pap test done every 3 years, HPV test should be carried out only if there is abnormal PAP test results
Age between 30 and 65	Pap test plus an HPV test (called “co-testing”) done every 5 years OR Pap test alone every 3 years.
Above 65	Regular cervical cancer testing, Women with a history of a serious cervical pre-cancer should continue to be tested for at least 20 years after that diagnosis, even if testing continues past age 65.
Woman who has had her uterus/ cervix removed.	May not be recommended for cervical cancer test.
woman who has been vaccinated against HPV	Follow the screening recommendations for her age group

The Papanicolaou test (which is abbreviated as ***Pap* test**)[3, 13] is a method of cervical screening used to detect potentially pre-cancerous and cancerous cells in the endocervical canal (transformation zone) of the female reproductive system.[4] Most of the cervical cancer causes are mainly diagnosed at stage of- II b because at this stage only the patient exhibits symptoms like pain in the cervical region and bleeding from cervix.[6] Age is one of the prime movers of cervical cancer as the age increases the susceptibility to cancer also increases may be due to the conversion of proto oncogens to oncogens or suppression of tumour suppressor genes or decreased activity of apoptotic factor in the body.[9, 11, 12]

SITE, DESIGN, SPAN OF WORK, SOURCE OF DATA & METHODOLOGY

SITE

This study was conducted at Mahatma Gandhi Cancer and Research Hospital, Visakhapatnam. It provides all facilities and health care services to the people in and around visakhapatnam and it is a well renowned hospital for affective treatment of carcinomas. It provides its services to the patients from Visakhapatnam, Vizianagaram, Srikakulam districts.

DESIGN

This study was an observational descriptive study consisting of 250 patients with different cancers. They were evaluated for the influence of age factor for the occurrence of cancer and the stage of cervical cancer at which the symptoms are observed and cervical cancer diagnosed and all the patients were female from different regions of different age groups.

SPAN OF WORK

This study was conducted for period of eight weeks in a total population of about 250 cancer patients.

SOURCE OF DATA

Patient data relevant to the study was obtained from the following sources.

- Patient data collection form.
- Treatment chart.

The above mentioned criteria fulfil the materials required for the study.

METHODOLOGY

In this observational study, the sequential order was followed and correlated the factors which were observed in the study.

- Collecting the data
- Preparing the CRF
- Evaluating data in various strategy

a. Prevalence of cervical cancer

b. Age of the patient

c. Provisional Diagnosis

d. Prevalence of other cancers like Ovarian, Breast and Gastric Cancers.

In this study the total population considered is females and therefore study has to be conducted with utmost care. Case sheets of the patients plays a very important role in determining their stage of the disease. In this study female population were considered from in and around Visakhapatnam and from Vizianagaram and Srikakulam districts. After collection of all data, analysis has to be done. In this study, comparison is made for cervical cancer among different cancers and we have evaluated the age of the patients at which they were effected mostly and also observed the diagnosis stages of the patient. The total number of population were considered and separated according to parameters taken. Graphs were plotted for

- Type of cancer vs. Case sheets,
- Age vs. No. of Patients,
- Stages vs. No. of Patients.

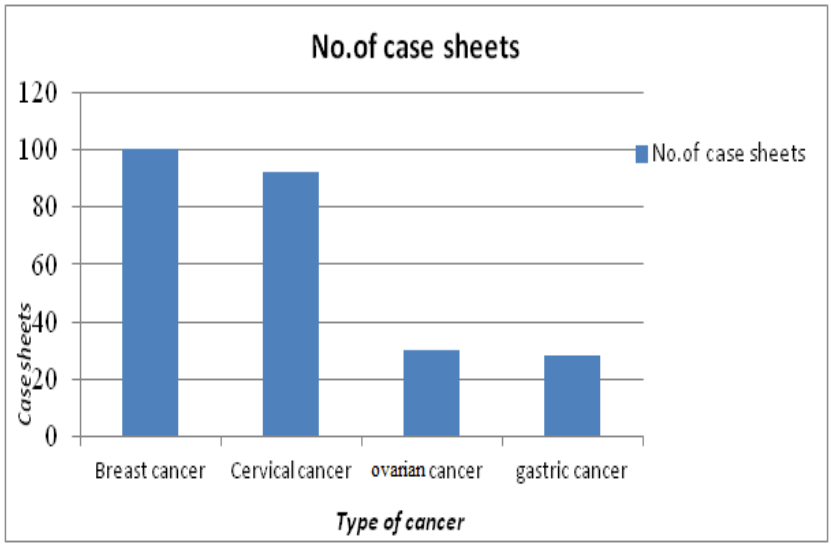
AN OVERVIEW OF RESULTS

From the case study examined we can come to a conclusion and it is well illustrated with the help of tables and flowcharts below

PARAMETER -1: Comparison of Cervical cancer prevalence among different cancers.

Table 2: Type of cancer Vs No. of case sheets

S.no	Type of cancer	No. of case sheets
1	Breast cancer	100
2	Cervical cancer	92
3	Ovarian cancer	30
4	Gastric cancer	28



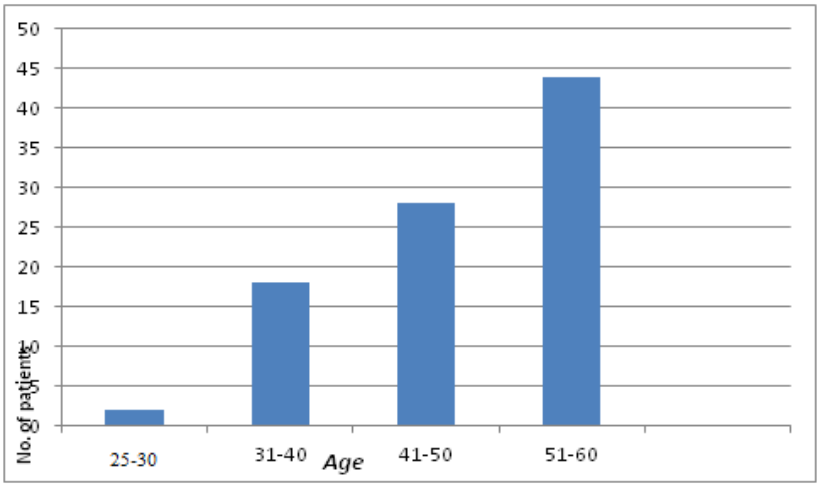
Flow chart 1: Comparison of Type of cancer Vs No. of case sheets

Percentage of breast cancer was fond to be 40%
Percentage of cervical cancer was fond to be 36.8%
Percentage of ovary cancer was fond to be 12%
Percentage of gastric cancer was fond to be 11.2%

PARAMETER- 2: Comparison on Influence of Age factor on cervical cancer.

Table-3: Age Vs No. of Patients

S.no	Age	No.of Patients
1	25-30	2
2	31-40	18
3	41-50	28
4	51-60	44



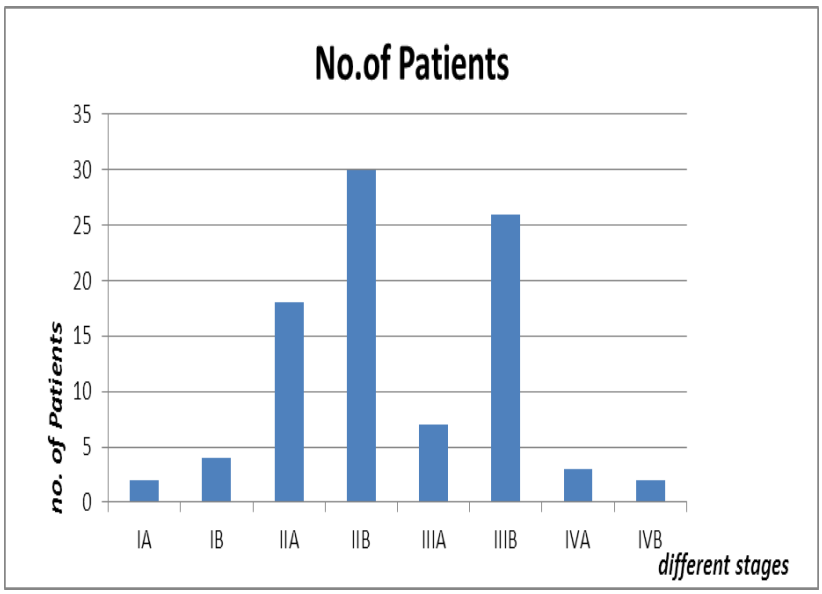
Flow chart 2: Comparison of Age Vs No.of Patients

The percentage of age (25-30) was fond to be 2.1%
The percentage of age (31-40) was fond to be 19.5%
The percentage of age (41-50) was fond to be 30.4%
The percentage of age (51-60) was fond to be 47.8%

PARAMETER-3: D**ifferent stages** at which they are diagnosed by their symptoms.

Table-4: Stage Vs No. of patients

S.no	Stages	No.of Patients
1	IA	2
2	IB	4
3	IIA	18
4	IIB	30
5	IIIA	7
6	IIIB	26
7	IVA	3
8	IVB	2



Flow chart 3: Comparison of different stages Vs No.of Patients

The percentage of IIA stage was fond to be 19.5%

The percentage of IIB stage was fond to be 32.6%

The percentage of IIIA stage was fond to be 28.2%

The percentage of IA, IB, IIIB, IVA, and IV B are fond to be nearly 2-7%

DISCUSSION

- **Flowchart**–I, perceives that out of 250 patients case sheets with different types of cancers like breast cancer, cervical cancer, ovarian cancer and gastric cancer, it was observed that breast cancer is most prone followed by cervix cancer which supports cervical cancer is the second common cancer in female in Visakhapatnam region, Whereas ovarian and gastric cancers are followed next.

- **Flowchart**–II elucidates that patient at age of 50-60 are diagnosed more than the lesser age groups the reason may be due to decrease immune response of the body and hormonal imbalance, as the age increase the activation of immune cells in response to neoplasm decreases (eg. Cell apoptotic factor) Expression of immune cells in the aged persons is less and conversion of proto oncogens into oncogens may be the reason for the occurrence of cervical cancer.

- **Flowchart**–III. It was noted that all the cervical cancer prone patients were diagnosed mainly at the stage II B the reason may be due to the appearance of symptoms like pain and bleeding from cervix.

CONCLUSION

By the above outcome of the results we can say that cervical cancer can affect woman mostly who is sexually active. The main reason can also be attributed to HPV infection which is transmitted through unprotected sexual contact. The other reasons may be due to smoking, having HIV infection, poor diet/nutrition or women who are not undergoing regular PAP test. The above results states that cervical cancer is the most dreadful cancer stated after breast cancer. So the patients should be alert and should undergo regular tests such as

- PAP test
- HPV test
- HPV vaccination

Patient of age group **50-60** were more proved to cervical cancer and hence it was concluded that female patient should improve there immune system with the help of some immuno stimulants. Maintaining a healthy bodyweight can help to keep hormone levels under control. This is especially important in women after the menopause, whose ovaries have stopped making hormones. When this happens, fat cells become the main hormone source.

More number of cases were admitted in hospital at the **stage II B** of cervical cancer and hence it was concluded that all the females should undergo periodical screening for the early diagnosis. Unfortunately, early signs of cervical cancer (i.e. at precancerous stages) are very non-specific like vaginal discharge with an unpleasant odour, or tinged with blood, and lower abdomen pain. Later, we could find symptoms at invasive stages of cancer .So early detection leads to the prevention and cure of cervical cancer.

The Pharmacist has to play an important role in improving the awareness of the disease and should give information and precautionary measures to get over this dreadful disease. The government of India should provide better facility and quality medicines to eradicate this cancer and the electronic and print media also has to take necessary steps to spread the information about cervical cancer to a wide reach.

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