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Short Communication

Retrospective Study of Cancer Patients Coming For PET/CT in the Department of Nuclear Medicine of Guru Gobind Singh Medical College and Hospital, Faridkot

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ABSTRACT

Punjab is the grain bowl of India and known for better physical fitness is now under focus for its increasing incidence of cancer deaths. Data are limited regarding cancer incidence among Malwa region of Punjab but examining such rates may provide us with insight into future actiological research possibilities as well as screening the staging and prevention. Screening modalities are constantly changing due to improvements in detection methods.

MATERIALS AND METHODS: The data is collected from department of nuclear medicine, of GGS Medical College & Hospital, Faridkot. Parameters are selected such as Age, Sex and Types of cancers in the cancer patients. All parameters were organized in tabulated form and statistically analysized and histograms are drawn.

RESULTS: Total 754 patients came to department of nuclear medicine for PET/CT during the time period of 12, Nov 2013 to 30, June 2015. In which 433 were females and 321 were male patients. Among the females, breast cancer was the most frequently diagnosed accounting for 182 cancer female patients. In the age group of 41-60 most of the cancer types are seen.

Among the males NHL was the most frequently diagnosed accounting for 59 cancer male patients. In the age group of 61-70 years most of the cancer types are seen.

CONCLUSION: Examining such rates will provide us with insight into future actiological research possibility as well as screening the staging and prevention. It is also important for public health professional to understand the dynamics of cancer incidence for future strategies.

Key Words: 1) Non communicable diseases 2) Nuclear Medicine 3) Cancer types

INTRODUCTION

Cancer is second largest non-communicable disease and India is going all out against cancer the non-communicable disease that affects 10 lakh new Indians every years and kills 4 lakh. There are 25 lakh cancer patients in the country. Accounting for 4 lakh deaths every year, cancer is the third biggest killer in the country. Based on GLOBOCON 2008 estimates about 12.7 million cancer cases and 7.6 million cancer deaths are estimated to have occurred in 2008 of their 56% of the cases and 645 of the death occurred in the

economically developing word. [1,2] Cancer rate has increased by 50% new case for the year 2020. [3] By 2015 number of cases in India will cross 15 lakh.

The cancer incidence rate in India is less than that of the western countries but due to the large population size, number of cases is prevalent at any time. [4] It is shown that in India 8.7million disease adjusted life years lost from cancer was second to ischaemic heart disease. [5]

Punjab state is known for better physical fitness is now under focus for its increasing incidence of cancer deaths. Recently a Punjab Pollution Control (PPCB) sponsored epidemiological study done by Post Graduate Institute of Medical Research (PGIMR) Chandigarh has indicated the rise in cancer cases in cotton belt of Punjab which is Malwa belt. [6] Punjab Health Department conducted a preliminary inquiry and found that the prevalence of cancer cases in these villages is similar to the other parts of India.

Cancer is spreading its tentacles all over the Punjab, a door-to-door survey carried out by a nascent social and political group could serve as an eye-opener that the disease in not just restricted to the Malwa heartland, but is spread out evenly, and killing nearly 8,000 people every year. [7] There is insufficient data available regarding cancer incidence in Punjab.

Data are limited regarding cancer incidence among Malwa region but examining such rates may provide us with insight into future aetiological research possibilities as well as screening and prevention.

The goal of cancer screening is to detect cancer at an early stage when it is treatable and curable. Screening modalities are constantly changing due to improvements in detection methods. PET/CT has revolutionized medical diagnosis by depicting the spatial distribution of metabolic or biochemical activity in the body which can be more precisely localized with anatomical structure obtained by CT scanning. [8] For example, many diagnostic imaging procedures in oncology, surgical planning, radiation therapy and cancer staging have been changing rapidly under the influence of PET-CT availability, and centers have been gradually abandoning conventional PET devices and substituting them by PET/CTs. [9-11] Although the combined/hybrid device is considerably more expensive, it has the advantage of providing both functions as stand-alone examinations, being, in fact, two devices in one.

MATERIALS & METHODS

Retrospective study of cancer patients coming for PET/CT in the department of Nuclear Medicine of Guru Gobind Singh Medical College and Hospital, Faridkot, collected from Nov 2013 to June 2015. In the department, registers are maintained in which all the information regarding the patient undergoing the treatment in the department is recorded. These reports provide all necessary information regarding the patients and disease. The patient information contains its name, gender, diagnosis, address and phone numbers. The present data is collected from these files and registers.

The parameters selected for prevalence are as under:-

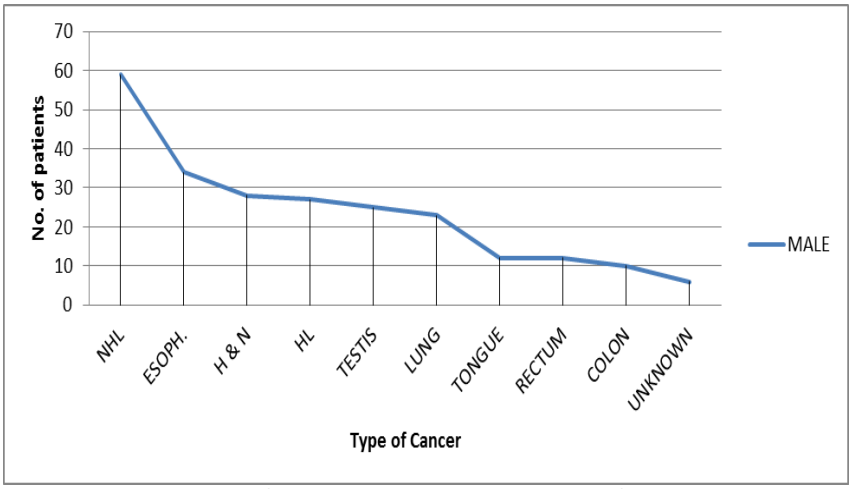
Age of cancer patients.

- Sex
- Type of cancer

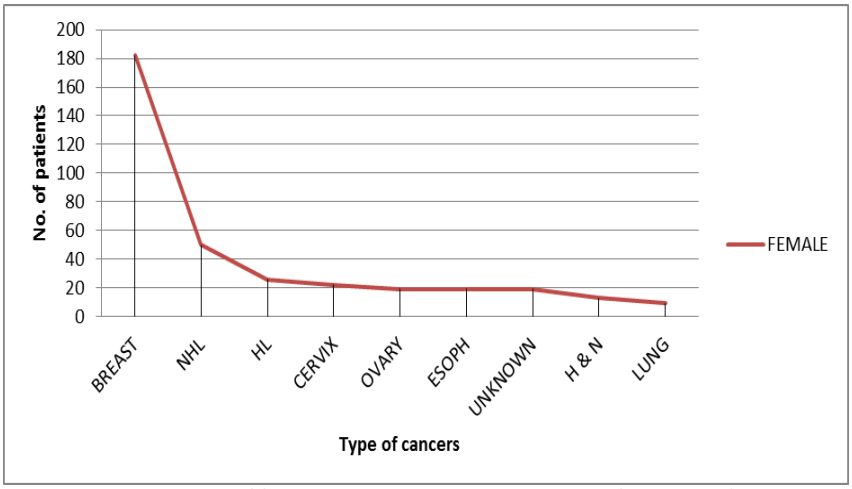
The data collected on all parameters was organized in tabulated form and statistically analyzed.

Descriptive analysis was done and histograms were prepared.

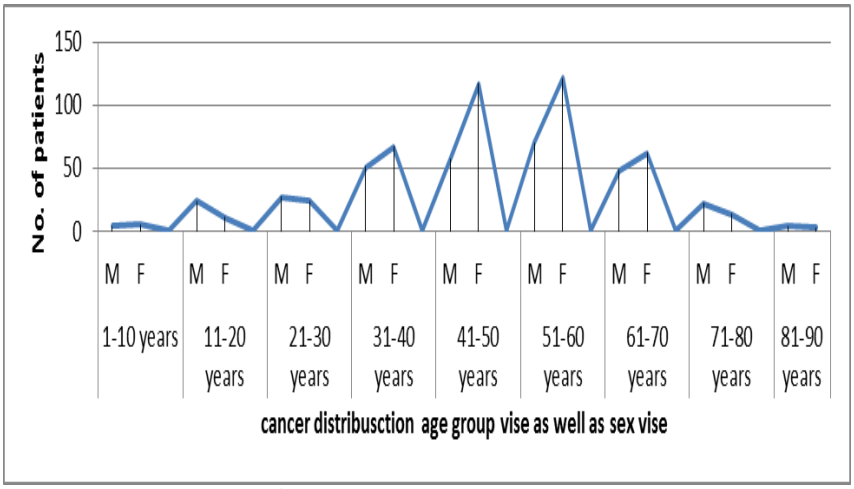
OBSERVATIONS AND GRAPHS



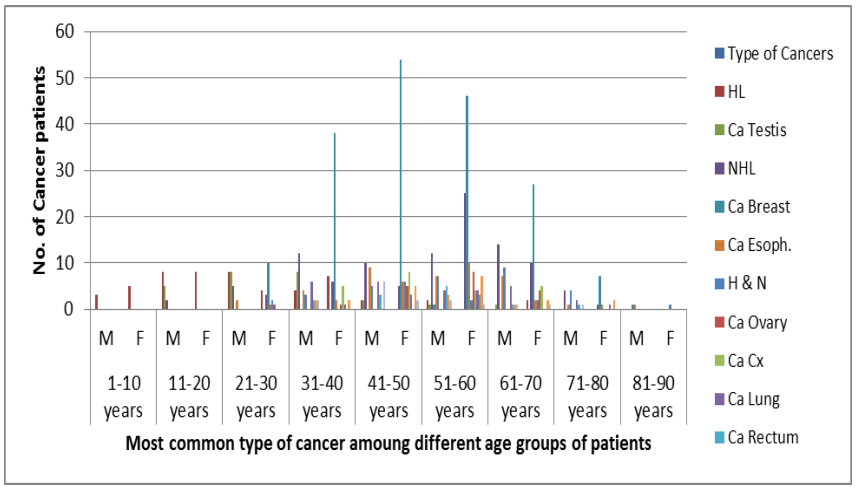
Graph (A): Shows number of male patients verses maximum type of cancers in male patients



Graph (B): Shows number of female patients verses maximum type of cancers in female patients



Graph (C): graph shows no. of cancer patients according to age group as well as gender type.



Graph (D): Graph showing distribution of most common type of cancers amoung different age groups of patients accoring the gender.

RESULT

The data are collected from Nuclear Medicine department of Guru Gobind Singh Medical College & Hospital, Faridkot.

- Total cancer patients - 754
- Female patients - 433
- Male patients - 321

Most of the patients were the age group of 41-60 year.

In males

- NHL = 59
- Ca Esophagus = 34
- Head & Neck = 28
- HL = 27
- Ca Lung = 23

Most of the male patients were the age group of 31-70 year.

In females

- Ca Breast = 182
- NHL = 50
- HL = 26
- Ca Cervix = 22
- Ca Esophageal = 19
- Ca ovary = 19

Most of the female patients were the age group 41-60 years.

DISCUSSION

Cancer, a disease is deeply rooted in environmental practices and lifestyle habits. Rural areas of Punjab are increasingly coming into focus for the spurt in cancer mortality. As per the National Cancer Registry Program of Indian Council of Medical Research, there has been a lot of regional variation of cancer incidence in India [12]

Most common cancer sites found in our study is of Breast cancer in females and NHL closely followed by esophagus cancer in males. Another site of cancer associated with the use of tobacco and dietary habits namely, cancer of the esophagus and head & neck cancers are an important leading site in both males and females. [13]

Cancer of the breast is the most feared cancer among women due to its frequency and psychological impacts. [15] Breast cancer is the second most common cause of death, and it is the third most frequent cancer of world, after lung and stomach, but it is by far, the most common cancer in women, in whom it is responsible for the 21% of new cancer cases worldwide. [14,16] This corresponds to a lifetime risk for a woman of about 6.2% in developed countries (on average) and 2.2% in developing countries. [16] There has been an increase in the incidence of breast cancer in developing countries. [17,18] Smoking accounts for 80% of the worldwide lung

cancer burden in male and at least 50% of all burdens in female. Cervix cancer the third most commonly diagnosed cancer and forth leading causes of cancer death in female worldwide in 2008. [2]

Developing a healthy life style can reduce the risk. The public awareness of this may help in early detection of cancer, decreasing the mortality and ultimately increase the probability of survival.

Malwa belt is also well known as cotton belt in India which uses strong pesticides**.** Excessive use of pesticides, impurities in water and change in life style are the main reason behind the increase in number of cancer patients.

CONCLUSION/SUGGESTION

The study comes to an appalling conclusion that OPD load in the cancer department of GGS Medical College & Hospital, Faridkot is increasing day by day. Accounting to the present hospital data more number of females is suffering from cancer than males in Malwa belt. Most common cancer among the male is NHL and esophagus cancer and in female is breast as well as NHL cancer.

A state wide awareness campaign is needed to convince farmers about the deleterious effects of excessive pesticide usage. As per our observation large number of female patients reporting to the department may be due inaccessibility to better placed treating centers which are available to male dominant society. The female patients presented with advanced disease due to lack of education and awareness, female hesitate to disclose the discussion in front of male physicians, female feel shy to report such problems to their husbands or other female members of the family, poverty also play a part for non-timely reporting/checkup in rural women.

Data on cancer incidence and mortality is not available on a state wide basis. Hospitals maintain their own records, but each hospital serves people from both within and outside the state. The state of Punjab is now having a cancer registry program and our hospital is also having National Cancer Registry Program for generating cancer Atlas in Punjab state.

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