



Breast Cancer Epidemiology, Screening, Treatment and Awareness in Pakistan



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Abstract

Breast cancer is the most common type of cancer and the most common cause of cancer-related mortality among women worldwide. Pakistan alone has the highest rate of Breast Cancer than any other Asian country as approximately 40% female patients are with Breast cancer appears at Atomic energy Cancer hospitals (AECHs) during the year 2015-2016. According to a research conducted approximately 1 out of every 10 women are likely to suffer from this disease at any point in their lives and about 80% of invasive breast cancer occurred in women above 45 years, In this study epidemiology, screening, treatment facilities and awareness of breast cancer by Atomic energy Cancer hospitals among Pakistani will be highlighted. The data is collected by 18 AECHs running all over country by Pakistan Atomic Energy Commission (PAEC) through Nuclear Medicine and Oncology Division, Directorate of Medical Sciences, Islamabad.

The most prevalent, frequently diagnosed and top most cause of cancer death in female population of Pakistan is breast cancer. The global variation in the incidence and prevalence rates of breast cancer is due to the differences in risk factors and availability of early detection, that lack of breast feeding, diet, less parity and smoking are most significantly associated with breast cancer in patients. Healthcare AECHs not only play an important role in treating patients but are also improving patient screening, as yearly mammography and clinical breast exam is the single most important step that clinicians can take to reduce suffering and death from breast cancer.

Keywords: PAEC: Pakistan Atomic Energy Commission; AECHs: Atomic Energy Cancer Hospitals

Abbreviations: Breast cancer; AECHs Pakistan; Risk factors; Diagnostic and Treatment Facilities; Awareness

Introduction

Breast cancer represents a significant health problem because of the number of individuals affected by this disease. Thirty per cent of all cancers in women occur in the breast, making it the most commonly diagnosed female cancer. Breast cancer is among the top 20 causes of deaths in Pakistan. Various phenomena serve as protective as well as risk factors for breast cancer. Several characteristics proving to be risk factors include age, weight, family history, physical activity, smoking, hormonal and reproductive factors. Women with advanced age, having middle class family background, higher body mass index and a high ratio of incomplete pregnancies are at significantly increased risk of breast cancer [1-10].

During the year 2015-16 about five thousand women patients with breast cancer diagnoses and treated at AECHs. PAEC Hospitals caters 85% of the total cancer patient burden of Pakistan. There is a trend of approx, 8-10% increase in patient turnout each year. The hallmark of all PAEC Cancer Hospitals as shown in Figure 1 is, not only being equipped with most modern equipment, but also operated by skilled teams of doctors, engineers, scientists, physicists and paramedical staff. Highly

specialized trainings are required to handle radiation and to use it on the human being. PAEC provide such trainings itself and from abroad to the doctors, scientists and the technical staff. Currently there are 2,494 personnel working in these hospitals including 224 doctors. Atomic Energy Cancer Hospitals are providing teaching and training facilities to postgraduate doctors in the fields of nuclear medicine, radiotherapy radiology, and medical oncology and to scientists in the field of medical physics in collaboration with Pakistan Institute of Engineering and Applied Sciences (PIEAS) Islamabad to strengthen specialized human resource for treatment of cancer.

Nuclear Medicine and Oncology Centers of PAEC are providing state-of-the-art health services to large number of patients across the country. Major services provided at PAEC Cancer hospitals are Diagnostic and Therapeutic Nuclear Medicine, Hormonal Assays, Radiotherapy, Chemotherapy, Indoor Cancer Ward, Breast Care Clinics, Biochemistry, Ultrasonography, Color Doppler, Diagnostic Radiology, Histopathology, Hematology, Molecular Based Diagnostics and Cancer Prevention & awareness Programs Radiation Oncology started in Pakistan from 1960s, the Pakistan Atomic Energy Commission (PAEC) has established

a number of hospitals all over the country that provide cancer treatment. Initially, these focused primarily on the provision of radiation-treatment facilities. Gradually, they have come to deliver chemotherapy in addition to radiation treatment, but do not have surgery or palliative care services. In common with many developing countries, Cancer hospitals tend to be under equipped and have more patients than is ideal for the facilities available. All PAEC cancer hospitals provide high quality care.

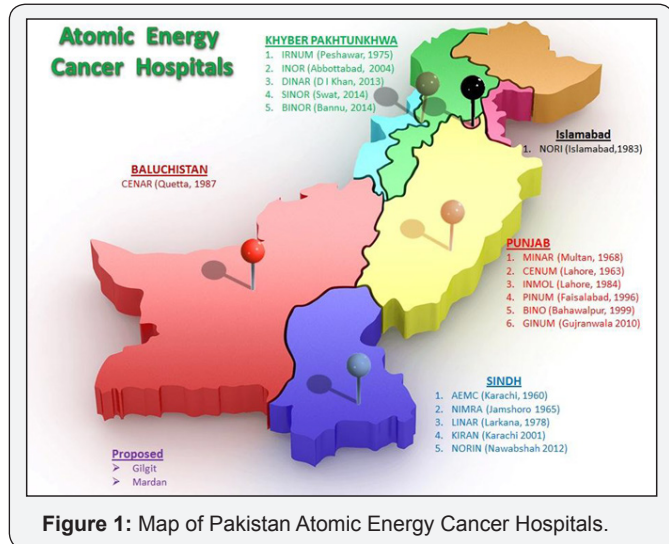


Figure 1: Map of Pakistan Atomic Energy Cancer Hospitals.

The problem is due to appearance of the majority of patients to a cancer treatment centre in the late stages of the disease when cure is usually unlikely. About 5-10 percent of women with breast cancer visit hospitals at an early stage when treatment is usually successful as shown in Figures 2-4. Prevention and screening are not strategies commonly used in Pakistan. Access to cancer treatment suffers from weaknesses of health policy, public awareness, insufficient financing, as well as inadequate human resources and facilities have resulted in a concentration of services in urban areas. Many people must borrow money to access treatment. A large, unknown number of people in rural areas cannot get treatment at all. Cancer drugs are often very highly priced and out of the reach of poor's people.

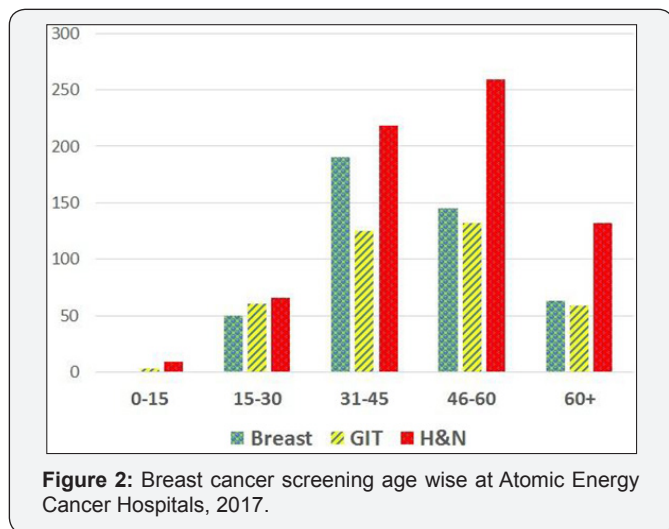


Figure 2: Breast cancer screening age wise at Atomic Energy Cancer Hospitals, 2017.

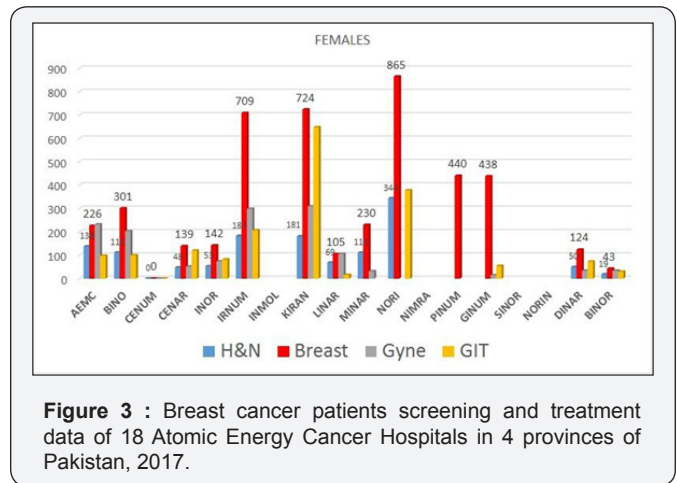


Figure 3 : Breast cancer patients screening and treatment data of 18 Atomic Energy Cancer Hospitals in 4 provinces of Pakistan, 2017.

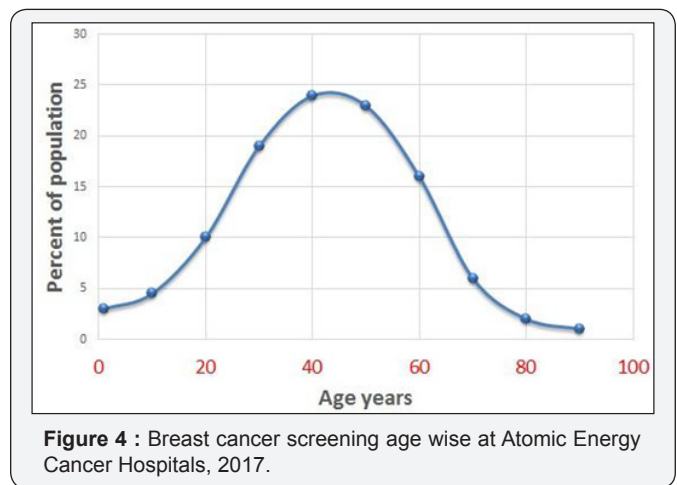


Figure 4 : Breast cancer screening age wise at Atomic Energy Cancer Hospitals, 2017.

Atomic Energy cancer hospitals also launched mobile breast care clinics, comprise of mammography, 3D ultrasound machine and stereo-tactic biopsy, are provided to NIMRA Jamshoro, INMOL Lahore and BINO Bahawalpur. Community outreach is part of cancer prevention & early detection mission; these centers reach medically less privileged women in approximately 95% of their examinations. This program allows these institutions to provide life- saving early breast cancer detection services to women all over peripheral areas. The centers with the help of Cancer Patients Welfare Societies and international organizations arrange weekly or fortnightly visits of adjoining remote areas to provide free of cost screening as well as creating awareness among general public about importance of early detection and cancer treatment facilities available at these centers.

In order to provide welfare support to the poorest patients at PAEC hospitals. Cancer Patients Welfare Societies have been registered with social welfare departments. These societies have been working at all hospitals in collaboration with hospital managements to help poor and needy cancer patients. The primary objective of these societies is to mobilize the general public to grant donations for the welfare of cancer patients. In addition, the societies aimed to create awareness in general public about cancer through seminars, symposia and visual

displays (banners, pamphlets and billboards). Pakistan Atomic Energy Cancer Hospitals are highly committed for disseminating information to general public regarding awareness about cancer that it is curable if diagnosed at an early stage. In this regard a number of events like seminars, symposia, conferences, workshops etc are being organized by these centers in collaboration with Cancer Patients Welfare Societies and other medical colleges, universities, hospitals and NGOs for cancer awareness.

Conclusion

Breast cancer is a common malignancy among women all over the world, especially Pakistan. It may be influenced by the presence or absence of many factors known as risk factors, but these are not the ultimate tool to report the risk of breast cancer. However, they may predict the chances to develop the breast cancer to some extent. The most common and major risk factors include avoiding mother feeding, age, family history, socio-economic status, age at menarche, hormonal therapy after menstruation and physical activity. Alcohol consumption, night-shift working, smoking and use of medicines are also described as risk factors. We described that the facilities provided at our hospitals are well aware of the risk factors, signs and screening modalities for breast cancer. Mobile laboratories, chemotherapy and radiation therapy is the key to success in treatment of breast cancer.

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