CHAPTER - I

BREAST CANCER: AN OVERVIEW

Cancer is an unpredictable and uncertain disease that can create heightened vulnerability for many individuals. Breast cancer has emerged as the most common cancer in women and the most common cause of cancer death in women. In India, the incidence of breast cancer has steadily increased over the years with 100,000 new cases being diagnosed every year. At a given time, there are as many as one million patients live with breast cancer in India. The life-time risk of developing breast cancer is found to be 1:30 in urban India and 1:65 in rural India as compared to 1 in 8 in the USA (Jhansi Rani and Swarna, 2006). Data obtained from Tata Memorial Hospital, a tertiary cancer referral centre in Mumbai, on the women undergoing treatment for cancer revealed that about 60% of them have early breast cancer, 35% with advanced stage and 5% have the disease spread to other organs (Parmer et al, 2005).

However, the survival rate of breast cancer has increased in recent times thanks to the advanced technology available for early detection, effective treatment and medical care delivery. It enables the victims to live longer and enhances their quality of life.

The primary treatment of breast cancer remains mastectomy - the surgical removal of all gross evidence of cancer. ‘Mastectomy’ refers to the surgical removal of one or both breasts, most commonly performed to remove a malignant tumor. While in a simple mastectomy only one breast is removed, whereas in a radical
mastectomy some of the muscles of the chest are removed with breast. The surgical removal of breast, unlike other cancers where the loss of organ is hidden, leaves flattened chest and causes embarrassment to the woman. Absence of breast, thus, puts the woman into great stress and affects her self-image.

Breast cancer causes severe mental stress on the affected woman during investigation, diagnosis and treatment as breast is regarded as a symbol of beauty, sexuality and motherhood. Over and above the primary function of feeding infant, breast symbolizes womanhood and serves as sexual object. Cancer breast, thus, tends to alter the image of the victim on her womanhood and sexuality. The impact of mastectomy surpasses the physiological domain and affects psycho-social domain as well.

Women’s thoughts and feelings following mastectomy revolve around two major themes: (i) the loss of bodily symmetry (one of the basic cultural criteria of physical beauty) was deeply felt, and (ii) the peace of mind (a characteristic of psychological beauty) was permanently disturbed by the fear of the recurrence of cancer and the possibility of death. While the asymmetrical body is a potentially (socially) visible problem of presentation and representation, the fear of recurrence is a fear of the workings of the body that are not visible and not knowable. A woman who has had a breast removed will concern herself, usually in isolation, with her secret unpredictable interior. This fear of death by cancer preoccupies her mind; though she may feel well, she fears that her body may not be well. Her fear is silenced through both social denial and incongruity with experience.
Therefore, understanding the bio-psycho-social problems and exploring the nature of the complex situation of those women survivors who had undergone surgical removal of breast assumes greater significance.

**CANCER AND BREAST CANCER**

‘Cancer’ is a collective term describing a large group of diseases characterised by uncontrolled growth and spread of abnormal cells. This group of disease (i) arises from different tissues and organs, (ii) differs greatly from one another in appearance and growth, (iii) may follow very different courses of development in their hosts, and (iv) responds to differently to the variety of therapies applied to them.

Cancer is synonymous with the term ‘malignant neoplasm’. Other terms that suggest malignant neoplasm include tumor, malignancy, carcinoma and aberrant cell growth. The word ‘neoplasm’ is derived from the Greek words ‘neos’ (meaning ‘new’) and ‘plasia’ (meaning ‘growth of new tissue’). Therefore, a neoplasm is defined as “an abnormal new growth of tissue that serves no useful purpose and may harm the host organism”. A neoplasm can be either benign or malignant. Benign is defined as “a usually harmless growth that does not spread or invade other tissue”. Malignant is defined as “a harmful tumor, capable of spread and invasion of other tissues far removed from the site of origin”. Thus, cancer is known as “a disease of the cell in which the normal mechanism of control of growth and proliferation are disturbed”.

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Cancer is an unpredictable and uncertain disease that can create heightened vulnerability for many individuals. Cancer is a common disease; one in three people can expect a diagnosis of some form of cancer in their lifetime.

Breast cancer refers to “a group of malignant diseases that commonly occurs in the female breast and infrequently in the male breast” (Luckman, 1993).

RISK FACTORS IN BREAST CANCER

Though causes of breast cancer are not known, there are, however, well-recognised risk factors. Being a woman and increasing age are the two most important factors. Other known risk factors include earlier diagnosis in the same or other breast; strong family history; early onset of menstrual period (before age 12); late menopause (after age 55); not having children and having first child after age 30; long-term use of hormone replacement therapy; obesity (particularly after menopause). It is a popular belief that birth control pills cause breast cancer. But the fact is that modern birth control pills contain a low dose of oestrogen and progesterone; they are not associated with an increased risk of breast cancer. Injury to the breast does not cause breast cancer. Though breast feeding does not prevent breast cancer, but reduces the risk.

The risk of getting breast cancer is not a certainty, even if a person has one of the strongest risk factors. For instance, a vast majority of women with breast cancer do not have a family history of breast cancer. Strong family history (genetic predisposition) accounts for only 5-10 per cent of breast cancers. Thus, it is clear that there are various factors that put women more at risk of breast cancer. Breast cancer
is more often a disease of pre and post menopausal women, though it occurs with surprising frequency in young women as well.

**Age**

Although a majority of breast cancers occurs in women over the age of 50, it can occur at any age. Available statistics indicate that women who are in advanced age succumb to breast cancer more compared to their counterparts. It is estimated that the average life-time risk is one in nine women; the risk in women of less than 20 years old is zero and the risk in women whose age between 20 and 30 years is very small.

**Genetic and Family factors**

BRCA1 and BRCA2 are genes known to be associated with breast cancer. Women who inherit a faulty BRCA 1 or BRCA2 gene have an increased risk of breast cancer. Carrying a faulty gene does not necessarily mean that the woman will get breast cancer; a mutation of the gene in the breast is what causes the breast cancer to develop. In the general population it is estimated that 1 in 800 women carries faulty BRCA1 gene.

‘Familial breast cancer’ occurs in women who have first and second degree relatives afflicted with the disease.

**Reproductive and Hormonal factors**

Most epidemiological studies demonstrate an association between early menarche and an increased risk of breast cancer. This effect decreases with age and is small after menopause. High parity (> four births) and young age at the first term
birth lend some protective effect and reduces breast cancer risk. Infertility and nulliparity increase the risk of breast cancer.

Natural menopause before the age of 45 confers a two-fold risk reduction compared with menopause after the age of 55. Surgically induced menopause also reduces the risk of breast cancer and this protection is life-long; early surgical menopause lowers the risk even further. However, prolonged use of oral contraceptive may increase the risk of breast cancer slightly.

**Diet and Life-style factors**

Obesity is associated with a two-fold increase in the risk of breast cancer. Dietary fat intake also may influence the incidence of breast cancer. High dietary fat intake and obesity go hand in hand for many patients. Women consuming sea food has a high content of omega 3 fatty acid, thus have low incidence than women consuming processed fat and saturated fat. Cigarette smoking increases the risk of cancer of all types including oral, lung, colon, and breast cancer. Alcohol consumption is also identified as a possible risk factor for breast cancer.

**Environmental factors**

Radiation-induced breast cancer has been documented in women exposed during the atomic bombing of Hiroshima in 1945 and individuals exposed to occupational ionizing radiation.

Radiation therapy for any other cancer also has a late effect of developing breast cancer. The effect of radiation exposure, such as X rays and Mammograms, has been found to be minimal with respect to breast cancer risk.
DIAGNOSIS OF BREAST CANCER

Preventive Diagnosis

Women should care for diagnosis if they notice a breast or armpit lump or nipple discharge. It is also advisable to call for health care provider if they develop symptoms after being treated for breast cancer, such as nipple discharge, rash on the breast, new lumps in the breast, swelling in the area, and pain - especially chest pain, abdominal pain, or bone pain.

The important interventions available for preventing breast cancer in women at high risk are the use of medications and preventive surgery. Selective estrogen receptor modulators are the drugs that reduce the effect of circulating estrogens in the body, one such drug is Tamoxifen. Tamoxifen reduces the risk of developing breast cancer in women who are at risk to 50 percent.

Risk reducing mastectomy involves the surgical removal of breasts in order to prevent or reduce the occurrence of breast cancer for women carrying BRCA1 or BRCA 2 gene. Removing both breasts reduces the risk of breast cancer much as 90 percent.

There is about a 50 percent reduction in the risk of developing breast cancer in BRCA1 mutation carriers if a risk reducing Oopherectomy procedure is carried out before the natural menopause.

Screening

Screening in breast cancer helps to detect cancers at the earliest stage possible because the extent of tumor at diagnosis is correlated with survival. Breast Self
Breast Self Examination (BSE)

Self examination of breast helps to detect breast lump and earlier detection of tumors. Breast cancer is most easily treated and cured when it is found early. Frequent BSE - may be once in a month - will not only increase the skill and confidence in examination but also make aware of a woman how her breast normally feels and identify any change. It is advised to do BSE is about a week after the menstruation, when breasts are not tender or swollen.

Performing BSE technique involves few stages and steps, in order: At the first stage (i) Stand in front of a mirror, (ii) Check both breasts for anything unusual, (iii) Look for discharge from the nipple, puckering, dimpling, or scaling of the skin. At the second stage, check for any changes in the contour of breasts (i) Watch closely in the mirror, clasp the hands behind head and press the hands forward; (ii) Press the hands firmly on hips and bow slightly toward the mirror and pull the shoulders and elbows forward; (iii) While shower glide fingers over soapy skin and concentrate on feeling for changes inside the breast. At the third stage, (i) Raise the left arm, use 3 or 4 fingers of right hand to feel left breast firmly, carefully and thoroughly; (ii) Beginning at the outer edge, press the flat part of the fingers in small circles, moving the circles slowly around the breast; (iii) Gradually work toward the nipple; (iv) Be sure to cover the whole breast; (v) pay special attention to the area between the breast and the underarm, including the underarm itself; (vi) Feel for any unusual lumps or
masses under the skin; (vii) Repeat the examination on right breast. At the fourth stage, repeat the steps mentioned in third stage lying down (i) Lie flat on the back with left arm over the head and a pillow or folded towel under the left shoulder (this position flattens the breast and makes it easier to check); (ii) Use the same circular motion described above; (iii) Repeat on right breast.

**Clinical Breast Examination (CBE)**

Clinical breast examination can be performed by health professional to detect lump or to educate and reinforce women about importance of BSE.

**Mammography**

Mammography is an X-ray examination of the breast, which can be performed as a screening or diagnostic examination. Screening mammography is to detect occult breast cancer in asymptomatic women and thus reduce mortality. By using seven different statistical methods, it is estimated that screening mammography would reduce 7% -23% of breast cancer mortality (Berry et al, 2005).

**Screening for BRCA1 & BRCA2 Genes**

Advanced research in human genetics has shown two highly penetrant breast and ovarian cancer susceptibility genes, BRCA1 and BRCA2 (Breast Cancer). BRCA genes are involved in regulating transcription and maintaining gene integrity by monitoring or repairing DNA mutations. They play a significant role as indirect tumor in a BRCA gene yield and have high probability of developing a tumor penetrance for breast cancer. Mutations in BRCA1 and BRCA2 are the predominant causes of heredity breast and ovarian cancer. BRCA1, identified in 1994, has been
localised on chromosome 17 and it is believed to explain approximately 50% of inherited breast cancer families. BRCA2, identified in 1995, has been localised to chromosome 13 and shares structural and functional similarities with BRCA1, and it accounts for approximately 30% inherited breast cancer families.

Genetic testing will certainly reduce anxiety of the family members of the breast cancer victims. Genetic counseling and testing for BRCA1 and BRCA2 are available today to clarify for a woman whether or not she is a carrier. BRCA1 carries primarily a breast cancer risk. Women are often advised to take Tamoxifen, which reduces breast cancer risk. Removal of both breasts as a preventive measure is drastic and is rarely recommended. BRCA2 carries the risk of both breast and ovarian cancer. Removal of the ovaries may be recommended when the risk of ovarian cancer appears high. However, close surveillance after testing is adequate for care. Testing positive (when the genetic marker is found) permits closer surveillance by mammography, clinical examination, and breast self-examination to pick up the earliest signs of disease. It also is a call to alert daughters to begin mammograms at an earlier age. Group therapy, in which those at risk share their fears and their coping techniques, can reduce anxiety. It is important to control their anxiety since those who had the highest anxiety may have trouble doing their breast self-examinations and getting mammograms.

**CLINICAL SIGNS AND SYMPTOMS OF BREAST CANCER**

The most common symptom is lump or thickening in the breast. Nipple discharges, nipple retraction, scaly skin around the nipple and skin change are
symptoms that are often associated with a more advanced stage of cancer. Mammography findings that may indicate malignancy include asymmetry, clusters of micro calcifications, specular masses with a sun burst appearance, architectural distortion and new density.

For mammography and a non-palpable lesion suggestive of cancer, two major procedures are indicated. They are needle localisation with surgical biopsy or a stereotactic fine needle aspiration and or biopsy. The needle localisation biopsy procedure involves inserting a thin wire under mammographic guidance into the area of the breast prior to the surgical biopsy; surgical excision using the wire as a guide and radiographic confirmation that the abnormal area identified on mammography was removed. Stereotactic fine needle aspiration or stereotactic core needle biopsy is an X-ray guided method for localising and sampling non-palpable breast lesions that have identified as suggestive of cancer on mammography.

To determine whether a lesion is solid or cystic, sonogram or ultra sound is primarily used as an adjunct to mammography. To investigate palpable lesions in young women, whose breast have dense fibro glandular tissue, and also in pregnant women ultra sound is useful. To identify viable tumor versus scan tissue, benign and malignant axillary nodes and tumor that are 0.5-1.0 cm in size, Positron Emission Tomography is used. It employs metabolic activity to image the breast tissue. It is also used to locate primary regional and systemic metastases.
TREATMENT FOR BREAST CANCER

There are different treatment modes used for breast cancer including chemotherapy, radiation therapy and surgery.

Chemotherapy

In medical oncology, the term ‘Chemotherapy’ is used to mean the focus on the systematic management of malignant disease by the use of antineoplastic medications. However, in medical parlance, chemotherapy refers to “the treatment of disease by chemical agents, first applied to the use of chemicals that attack the causative organisms unfavorably but do not harm the patient” (Dorland’s Illustrated Medical Dictionary, 1981). In the treatment of cancer, chemotherapy induces tumor regression by halting cellular biochemical functions that allow cell replication. It is administered either as a single agent or combination of antineoplastic agents, depending upon the tumor.

Chemotherapy is found to prolong disease-free intervals for number of tumors, increase survival period of the victims, and control pain and suffering. It may be used preoperatively in an attempt to convert non-resectable disease to resectable disease. As an adjunct to curative surgical resection, chemotherapy has been shown to improve the disease-free interval and survival in breast cancer. Chemotherapy agents include Alkylating agents, Plant alkaloids, Anti-tumor antibiotics, Anti-metabolites and Hormonally active agents.

The most common physical symptoms experienced after chemotherapy are nausea, vomiting, bone marrow depression, hair loss, fatigue, weight gain, mucositis,
neurotoxicity, menopausal symptoms and rarely hemorrhage cystitis. Sexual problems are also reported as a result of chemotherapy.

Radiation Therapy

Radiation therapy is the use of high-energy, ionizing radiation or X-rays to treat cancer. It is to deliver a precise dose of ionizing radiation to a specific tumor volume while sparing the surrounding healthy tissue (Rubin 1983). Radiation treatment is based on several physical and biological principles. When subjected to ionizing radiation the living organism responds in a generally predictable manner. Irradiated cells are either destroyed or rendered incapable of reproduction.

Radiation effect at the cellular level is a function of the cell’s response to the damaging effects of ionization. Although the goal of treatment is to destroy tumor tissue, healthy tissue must be preserved. Radiation doses to the breast are delivered using super voltage equipment and tangential fields to minimize lung and heart exposure. Teletherapy is external radiation treatment given with a machine or source at some distance. Brachytherapy is the form of internal radiation therapy in which a radioactive isotope or radionuclide is placed directly on or adjacent to tumors. The role of radiation in the treatment of localised breast cancer has evolved over the years to the point where such therapy is now considered standard treatment.

Radiation-related fatigue is experienced by majority of the patients. Skin reactions such as itching, dryness, scaling, redness and tenderness occur in almost all patients. The breast may feel sore and warm to touch. Arm oedema occurs more commonly in patients who have axillary dissection followed by radiation therapy to
the axilla. Late adverse effect of radiation may include secondary malignancies usually manifesting 10 to 15 years after treatment.

**Surgery**

Surgery is the oldest method used to treat cancer. Ancient Egyptian documents describe excision of tumors as early as 1600 BC. During the time of Hippocrates, cancer was described by the word ‘carcinose’, meaning ‘Crab’. In the 12th century, European physicians practiced radical cutting away of breast cancers with removal of the entire affected part, including the veins and the roots. Removal of malignancy in the later 16th century included excision of local lymph nodes, if possible and ligation of blood vessels supplying the tumor. The 1980s and 90s yielded increased understanding of the genetic and molecular basis of cancer.

The primary goal of cancer surgery is complete eradication of local and regional tumor. Nearly 60% of women diagnosed with breast cancer today have localised node negative breast cancer which is highly curable. However, breast conservative surgery is not recommended for women having large tumors and those who are unwilling to undergo adjuvant radiation therapy.

The surgical removal of one or both breasts, known as *mastectomy* which is originated from the Greek term ‘mastos’ meaning the breast, is commonly performed to remove a malignant tumor. While *radical mastectomy* refers to removal of breast and some of the muscles of chest (Mosby’s Medical Dictionary, 1994), *prophylactic mastectomy* is an option available for patients at risk of developing breast cancer.
Surgery on the breast, however, is very much related to the body image of the cancer victim. Conservative surgical procedures are preferred to help preserve a positive body image. Post-mastectomy breast reconstruction is an important rehabilitative option, pursued by significant number of women undergoing mastectomy, influenced by the factors which include how much her breasts contribute to her overall body image and self-esteem, the degree to which she wishes to prevent local recurrent and how she feels about wearing an external prosthesis.

Modern breast reconstruction began in the 1960s with the advent of silicone implants. The use of silicone breast implants has dramatically come down from 95% to 10% since the introduction of saline tissue explants as an alternative to silicone in 1980s. An important factor in woman’s sexual outcome is that mastectomy - with or without reconstruction - results in permanent loss of sensation in the breast area. Most of the women, who opt for breast reconstruction, were found to be younger, better educated, have higher income and at early stage of disease. For one or the other reason, older women are less likely to receive breast conservation and may not undergo lymph node dissection and be less likely to receive adjuvent tamoxifen.

**Hormone Replacement Therapy (HRT)**

HRT is prescribed for premenopausal breast cancer survivors. Giving estrogen therapy for breast cancer survivors has become controversial issue, as the risk associated with HRT has been increasingly documented. For instance, women with breast cancer who are forced in to menopause through chemotherapeutic agents
have reportedly experienced severe symptoms compared to the women who have
natural hormonal decrease over time.

**New Treatment and Strategies**

Growth of 70-80% of all breast cancer is stimulated by oestrogen; and these
hormone sensitive tumors often respond well to treatment that interferes with the
production of oestrogen. Tamoxifen is a drug used for that purpose. Another therapy
is Aromatase inhibitors (AIs), which work by blocking the conversion of the enzyme
aromatase found in faulty tissue, which is the main source of oestrogen in the post-
menopausal women whose ovaries have stopped functioning. The Aromatase
inhibitors are used to shrink tumors before surgery and as extended adjuvant
treatment.

**Palliative Care**

Though cancer pain is perceived as the most feared consequence of cancer,
the need for a pain clinic as an integral part of cancer management is yet to be widely
recognised in our country. The recent advances made in palliative medicine to cancer
pain management are closely linked with the progress made in the treatment of cancer
itself. There are three approaches of interventions for cancer pain: (i) change the
perception or sensation of pain (pain medications); (ii) treat the underlying pathology
(chemotherapy, radiation therapy and surgery); and (iii) diminish the emotional or
reactive component of pain (relaxation techniques, distraction, hypnosis and bio-
feedback).
AFTER-EFFECTS OF BREAST CANCER

Wound infection and stiff shoulder, experienced after breast removal, restrict daily activities like weight lifting and forced women to avoid constraining clothing. Loss of one or both breast affects women’s physical, social and emotional functioning compounded by feelings of mutilation and altered body image, anxiety, depression, hopelessness, guilt, shame and fear of recurrence, diminished self-worth, loss of sense of femininity, erosion of confidence in sexual attractiveness and prowess, abandonment and death.

Although cancer treatment extends life-expectancy, the treatment itself often leaves patients with functional deficits that can have long-term medical, psychological, vocational and economic implications. Symptoms of fatigue, pain, anemia, neutropenia and changes in weight or appetite may continue indefinitely. As levels of impairment increase during the survivorship phase, psychological distress will also increase.

Most methods used to treat cancer produce body image changes. Body image includes all aspects of one’s physical-self, such as physical appearance, state of health and sexuality. Freud (1961) in developing his psychoanalytic theory referred to body image as phenomenon which he considered to be an element of the ego, as body ego. According to Erikson (1963), body image develops gradually as the person matures. Body image is related to self esteem, self concept and identity. Of the numerous types of cancer that affect body image, the mutilating effects of mastectomy for breast cancer is obvious. Radio therapy often leads to skin changes, vaginal stenosis,
changes in bowel habits, changes in urinary frequency, pain, fatigue, nausea and vomiting, sexual dysfunction all of which alter body image. Chemotherapy may also alter the body image; hair loss is the frequently reported side affect of chemotherapy.

The diagnosis of cancer itself is a life-altering experience for anyone. There are also physical symptoms of the cancer and its treatments that overlap with the somatic symptoms that are included in psychiatric conditions. There are many psychiatric conditions that occur in patients with cancer; the more commonly diagnosed are depression, anxiety, adjustment disorders, depression and delirium. Often patients have mixed states or combinations of symptoms such as depression and anxiety. Further, there are symptoms that do not get diagnosed but are quite difficult for patients to manage such as difficulties with falling asleep and staying asleep.

Breast is related to many psycho-social factors that have a direct impact on sexuality. Any treatment involving the breast is often viewed as disfiguring. Hence, the diagnosis of breast cancer and the subsequent surgical removal of breast are major fears among women. Body image disruption is believed to be the major factor involved in the sexual difficulties of breast cancer patients. Both the patient and her sexual partner can experience temporary or permanent sexual difficulties. Sexual dysfunction following mastectomy has been reported in the range of 23 to 37 percent. Clinical impressions have revealed some dysfunctions immediately following therapy with gradual return to near normal function over a period of time. The overall psychological impact of breast cancer on marital relationship is considerable.
Wellisch (1985) described five important variables that influence the impact of breast cancer on a marital relationship: (i) the status of the relationship before the cancer developed, (ii) the longevity of the marriage, (iii) the stage of the breast cancer, (iv) the point in the course of the illness, and (v) the interpersonal skills of the partners. Sexuality being a multidimensional, complex phenomenon involving biological, inter-personal and behavioural dimensions, sexual health is related to the integration of the somatic, emotional, intellectual and social aspects of sexual being in ways that are positively enriching and that enhance personality, communication and love.

Treatment for breast cancer can diminish or destroy a woman’s reproductive potential. Many young women remain premenopausal and fertile for at least some period of time after breast cancer treatment and some are interested in interventions to preserve fertility because of the intricate relationship between breast cancer and hormonal consideration of fertility and reproductive issues. A common recommendation is for breast cancer survivors to wait at least 2 years after treatment before attempting a pregnancy. For women with hormone receptor positive disease, 5 years of tamoxifen therapy is often recommended during which time pregnancy is contra-indicated.

**BIO-PSYCHO-SOCIAL ISSUES**

Anyone who has been diagnosed with cancer is a survivor, from the time of diagnosis and for the balance of the individual’s life. Family members are considered as secondary survivors because they are also touched by the experience of cancer of a family member. Survival rate from cancer have steadily increased over the past few
decades due to multiple factors, including changes in the basic understanding about
the disease, growth of treatment modalities, increased screening and early detection
activities, enhanced rehabilitation and support interventions and changes in socio-
cultural mind set.

While people with a history of cancer could now live longer, there is a
growing body of evidence demonstrating long-term and late effects among survivors
such as physiological effects - secondary cancers, cognitive changes, cardiac
dysfunction, respiratory late effects, infertility and sexual dysfunction; psychological
effects - depression, anxiety, uncertainty, isolation and altered body image; social
effects - changes in inter-personal relationship, poor health status and financial
burden. These effects may persist for either short time or over a period of time. Many
of them may continue to have these effects even for months and years, after the end
of treatment.

No doubt that increased awareness of breast cancer and improved detection
methods and treatment regimens have led to more women - particularly the young -
being diagnosed, treated and surviving cancer. However, for patients and families the
treatment decisions are only the beginning of long-term dilemmas that may lead to
changes in employment, diminish social functioning, threaten psychological well-
being, reorganize family relationships and drain economic sources of family.

Although breast cancer and loss of a cherished body part is a major stress for
any women, there is great variability in their psychological responses. Since the time
of detection and diagnosis to treatment, the women had to face a set of choices before
made up their mind for going a particular treatment or not. Invariably, the first thing that they encountered at the time of initial discovery is of a lump or symptom suggestive of breast cancer. Thereafter, in seeking examination of her symptom or a follow up on a recommended course of action depends on a number of variables, including socio-demographic status, knowledge, attitude and beliefs about cancer, personality and coping style, and the nature of existing doctor-patient relationship. A number of studies have found out that many women do not disclose the symptoms to anyone for fear of cancer treatment thus run in to the risk of delayed treatment. At the consultation with a surgeon a woman faces her second set of decisions as to what treatment(s) to undergo. Differences persist in the type of breast cancer treatment received by a woman based on area of living, age and education. Third set of decisions are relating to the post-treatment follow-up care.

A number of variables play significant roles in the process. Age or the point in the life-cycle at which breast cancer occurs is of prime importance. Unlike most cancer, breast cancer affects women across a broad age range, from teenage to centenarians. Concerns about the threat to life, future health as well as fears of potential disfigurement, disability and distress associated with treatment are common to all women diagnosed with breast cancer. Younger patients experience more psychological distress than older patients with breast cancer because the pressure and expectations for physical beauty and sexual function are greater in younger women.

Another important variable contributing to adaptation is the patient herself. Her personality and unique coping patterns, prior trauma experiences and stressful
life-events also may adversely affect adaptation to breast cancer. The belief that she is responsible for her own illness and its outcome become an added psychological burden. Some women, with a high investment in their bodies, cannot tolerate even the idea of loss or damage to a breast. They may delay seeking consultation for the symptom.

A woman’s socio-cultural background can further influence her breast cancer experience. For instance, how cancer is viewed in her community - whether cancer is seen as stigmatizing or never discussed - will affect her adaptation response. On the other hand, some breast cancer survivors may feel more comfortable with body image when they perceive greater social support from community. Women with less adaptability tend to experience more difficulty in interacting with physicians.

Prolonged anxiety or depression is not an expected reaction to a cancer diagnosis; stress reaction is common around the time of diagnosis and onset of treatment. Adjustment to breast cancer depends more on the responses from other significant people such as spouse, family and friends.

Fear of genetic risk adds the patient’s as well as family’s psychological burden. Women who develop breast cancer often immediately begin to feel guilty and anxious that they have put their daughters at risk. They have the double worry of their own breast cancer and the possibility of their daughters’ developing it. In point of fact, the proportion of new breast cancer cases each year with a genetic origin amounts to about 5 percent; however, the information has been so widely circulated, especially as genetic testing become available, that women whose relatives have
breast cancer are highly fearful about developing the disease. The family is concerned that its members will develop the same cancer as the one who is ill due to a higher genetic risk. When one person in a family is tested and found positive, the issue arises of informing other family members and suggesting that they be counseled and tested. Family conflicts can ensue when there are differences in opinion about the value and appropriateness of testing.

Detection of cancer at early stage and treatment raise a set of consequences during their working period when they may have otherwise lived without knowledge or effects of their disease. Physical disability, memory loss, lack of control over work schedules, need for transportation and type of work performed are some of the impacts of cancer on their working life. Treatment-related disabilities are likely to be most pronounced during the first few months following diagnosis. The treatment guidelines for breast cancer recommend a combination of surgery, radiotherapy and chemotherapy depending on cancer stage so as to reduce the chances of recurrence and prolong survival. But, the treatment regime can also cause impairments such as limiting the range of motion in the arm on the affected side lymphedeme, reducing concentration and cognition, increasing pain and fatigue.

Breast cancer survivors have to encounter at least four situations that hinder successful job re-entry: (i) Breach of confidentiality of medical information, (ii) Absence of support from co-workers and supervisors to assist in re-entry and management of the stigma associated with cancer, (iii) Difficulty in discussing with colleagues about ill-health, and (iv) Difficulty in asking for and receiving assistance.
Early retirement may be an option for coping with the cognitive and functional disabilities from cancer and its treatment. However, those who are self-employed may not likely to have many options for job sharing, retirement or working fewer hours; they may need to sell their business or hire someone to assist or make other family member(s) to take over the responsibility. Anyway, such a transition can cause worry, a sense of loss and financial and emotional hardship to the survivor.

The experiences of breast cancer and cancer treatment have significant impact not only on the patient but also on his/her family. Family support is integral for the positive adjustment and the length of survival. Family members in general and the husbands in particular not only fear about the possibility of recurrence, but also anxious about dealing the emotional responses they anticipate in the patient. Marital problems which may have pre-existed at some level before the woman’s diagnosis now not increase their intensity but may also even drive to the risk for break down. Yet, in rare cases the diagnosis of cancer brought the spouses closer.

Regardless of socio-economic status, almost all families which experience cancer and cancer treatment have financial problems. Family members may have a sense of powerlessness in the face of the disease over a period of time. The medical care needs of cancer patients extend far beyond the initial treatment episodes. Employed care-givers must balance their work roles with care giving task. They may not have enough time available for care giving and job performance may be negatively affected through decreased productivity and quality of work. In some cases, the care-givers’ social role may also change. Persons with limited financial
resources are more likely to be tied up with restricted treatment options, particularly when the cancerous stage is advanced. Financial problems may inhibit treatment, making cancer more costly in the long run. Patients with such financial hurdles are likely to experience greater morbidity and shorter survival chances.

The effect of treatment on children is considerable when the mother develops breast cancer. Many children suffer from behavioural problems and emotional distress during the treatment of their mothers. Role and relationship concerns have been identified as major issues among adult children. The children’s stresses, in turn, greatly affect the coping ability of the mother. Cancer may be more difficult for families to accept and deal with during critical transitions such as marriage, birth of a child or on verge of retirement. Losses of friends or family members, children leaving home, financial difficulties are some of the other important emotional crisis for many families. However, the responses of family members to the demands of illness on emotional, physical, social, spiritual and financial resources may vary.

There is evolving emphasis on quality of life and issues of survivors in the recent past as more number of patients lives longer with cancer. There has been a paradigm shift in the cancer care from cancer patient to cancer survivor i.e., the experiences of living with, through and beyond cancer, and the challenges faced in their daily life. The challenges include persistent and after-effect of treatment and questions such as who will care for them, who will pay the added costs and how.

Though the after-effects from cancer and treatment are often intertwined and difficult to separate, many research studies have classified as: Psychological after-
effects - fear recurrence, chronic anxiety, uncertainty about future, fear of dependency, survivor guilt, post-traumatic stress disorder, depression, anger, concern about body image; Social after-effects - change in social roles or relationships, distress within family unit, employment discrimination/ problems, insurance and financial concerns; Spiritual after-effects - creating new normal or rediscovering self, questioning the meaning of illness and life after cancer, changing sense of hope and future, change in relationship with organised religion and God, surviving existential crisis and need to give back; Sexuality after-effects – are the combination of physiological, psychological, social or spiritual effects. Physiological changes such as vaginal atrophy or erectile dysfunction can lead to psychological distress. Psychological distress including depression, body image and self-esteem issues can lead to social problems. Social problems such as divorce, dating or job loss can affect a sense of self or essential being.

There is significant impact of breast cancer on the spouse also. Fear of death, uncertainty of recurrence, emotional distress, impact of life style and role changes are also experienced by the spouse. Emotional recovery from breast cancer is an individual journey and for majority it is more intense during first one to two years.

A number of risk factors are associated with life style; women after breast cancer treatment should avoid minor traumas, such as animal scratches, needle and thorn pricks, cuts, burns to avoid anything that might impede lymphatic flow like constricting jewellary, tourniquets, inflated blood pressure cuff on the affected side, shoulder bag weighing more than 5 lbs.
As some women continue to work throughout their treatment whereas others return to work only after the completion of the entire course of therapy, the cost of investigation and treatment procedure may be an added burden to the family.

Pregnancy after diagnosis of breast cancer is discouraged because of the fear that high level of hormones will promote metastasis. Chemotherapy or hormone therapy also causes a woman to enter in to early menopause, and estrogen replacement is not advised because of fear of metastasis.

**RATIONALE OF THE PRESENT STUDY**

Among cancers, breast cancer has become an important cancer with significant psycho-social impacts. Though advanced diagnostic procedures and treatment regimen could now prolong the survival period of the breast cancer patients, their experiences revealed that they struggle to cope with a chronic illness ‘for ever’ rather than an illness that ‘has been cured’. Socio-cultural background and stigma associated with cancer further influence the women’s harrowing experiences. Financial strain of treatment cost either delay the treatment or affects the continuity in the treatment. On the other hand, effect of treatment procedures cause physical disability, body image disturbance and psychological distress. Role-changes and economic burden caused by the disease put major stress on the patient’s family and affect family relationship. Family may avoid its social network because of the fear of disclosure of cancer to others and the subsequent alteration of body image. Women from poor economic strata have to spend a major portion of their earning and saving for surgery and continuous medical treatment; hence, breast reconstructive surgery or
prosthesis is a distant dream for them. Being chronic cancer patients, they depend on their families for long-time psycho-social support and help.

Therefore, a study of this nature is not only necessary to dwell at length the biological, psychological and sociological situations of breast cancer survivors but also important to suggest suitable steps for reducing and relieving stress so as to enhance the coping strategies among the patients and their families.