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AWARENESS LEVEL, SELF EXAMINATION AND SCREENING FOR BREAST CARCINOMA AMONG FEMALE PATIENTS OF KASHMIR – RECENT DEVELOPMENT IN IMPROVING LIFE EXPECTANCY THROUGH NUTRITION

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ABSTRACT

Breast cancer is the commonest form of cancer among women in the developed world. Its incidence has increased slowly since the 1960s. About one women in twelve at some stage in their lives get affected by breast cancer, in 1993, 15000 women died in England of breast cancer. About 90% were aged over 50. Epithelial malignancies of the breast are the most common cause of Cancer in women. In this study sample of one hundred breast carcinoma patients were studied at SKIMS and SMHS hospitals in Kashmir. The data reveals that 42% of patients were in the age group of 40 – 50 years. 90% of the females had no family history of breast carcinoma or carcinoma of any other organ. 58% of the females had never self examined their breasts to check any kind of abnormality. The knowledge about mammography was almost negligible. Only 10% of the females have heard about it from mass media. Due to unawareness about breast screening most patients were in the stage III and IV of the breast carcinoma from where recovery is impossible. It is found that females need to be educated about breast self examination and mammography through mass media, extension programs and awareness camps in schools and colleges. The role of antioxidants and phytochemicals (present in fruits and vegetables) in cancer prevention is also found by many researches. Hence more antioxidant rich food needs to be incorporated in daily diet .

KEY WORDS: *Antioxidants, Breast Carcinoma, Mammography, Physical examination, Phytochemicals.*

1. INTRODUCTION

Cancer, the word, comes from the Latin for "Crab". It refers to any malignant growth or tumor caused by abnormal and uncontrolled cell division, and is regarded as a diseases of body's cells. It's development involves damage to the DNA of cells; this damage accumulates over time. When these damaged cells escape the mechanisms in place to protect the organism from the growth and spread of such cells, a neoplasm is established. (Food, Nutrition, and the prevention of Cancer, 1997).[5] (Krause', 2004).

1.1 Breast Carcinoma:

Breast disease are classified as :

1. Benign Breast disease
2. Malignant Breast disease.

Benign Breast Disorders (BBD)

Can be defined as any non-malignant breast condition . BBD is not life threatening.

The benign breast disorders are

- Nipple inversion
- Mammary duct fistula
- Cyst formation
- Epithelial hyperplasia of pregnancy
- Benign duct Papilloma

Malignant Breast Disease

Breast Cancer is a malignant proliferation of epithelial cells living in the ducts or lobules of the Breast. Epithelial malignancies of the breast are the most common cause of Cancer in women, accounting for about one-third of all cancer in women. Human Breast Cancer is a clonal disease; a single transformed cell- the end result of a series of somatic (acquired) or germ line mutations, is able to express full malignant potential.

1.2 Incidence In Kashmir

According to hospital based record (SKIMS) 2500-3000 new case of breast cancer are detected.

Date of New Cancer Patients Registered In Regional Cancer Center – SKIMS

"Top Ten Cancers In Kashmir".

		2000	2001	2002	2003	2004	2005
1	Stomach	430	415	447	428	445	520
2	Esophagus	451	413	458	430	470	460
3	Lung	135	158	144	190	220	245
4	Lymphoma	84	90	100	142	160	220
5	Colorectal	58	54	84	90	110	160
6	**Breast**	**106**	**83**	**114**	**132**	**145**	**157**
7	Acute Leukemia's	54	60	74	71	85	115
8	Brain	47	49	54	69	75	80
9	Skin	48	46	63	66	68	64
10	Ovary	28	27	31	30	42	63

Qurieshi, Mariya A. et.al conducted study for a period extending from January 2006 to December 2012 in Department of Community Medicine, Government Medical College, Srinagar, Department of Surgical

Oncology, SKIMS. A total of 1598 cancer patients were admitted during this period. Overall male to female ratio was 1.33 : 1. Stomach cancer was the most commonly reported cancer (25.2%), followed by colorectal cancer (16.4%) and lung cancer (13.2%) among males. For females, colorectal cancer (16.8%), breast cancer (16.1%), and stomach cancer (10.4%) were the most frequently reported cancers in order of frequency. (Epidemiology of Cancers in Kashmir, India: An Analysis of Hospital Data) [8]

Attam.A, Kaur.N, Saha.B, Bhargava.SK(2002); Carried research on 101 cases of breast cancer and 123 healthy controls, under the title "Mammographic density as a risk factor for breast cancer in a low risk population".

They conducted a case control study to evaluate the role of mammographic density as risk factor for the development of breast cancer in Indian patients. They found a low prevalence of dense mammographic patterns (16.3%) in controls and (26.7%) in cases was seen in the study population. Premenopausal women with breast density of 50% or more had 3.8 times risk of developing breast cancer than women with breast density of <10%. In postmenopausal women with mammographically dense breast, no such increase in risk was noted.

Hence they concluded, high mammographic density patterns are associated with an increased risk for the development of breast cancer in younger women in a low risk population, where as no such increase in risk is seen in postmenopausal women.[1]

Narod.SA, Dube.M-P, Klijn.j, et.al., (2002);Carried a study on "Oral contraceptives and the risk of breast cancer in BRCA1 and BRCA2 mutation carriers". This matched case-control study enrolled 1311 pairs of women with known deleterious BRAC1 or BRCA2 mutations. Women who had been diagnosed with breast cancer were matched to control subjects by year of birth, country of residence, mutation (BRCA1 or BRCA2), and history of Ovarian cancer.

They found that among women carrying the BRCA2 mutation, any use of oral contraceptives, was not associated with an increased risk of breast cancer. For BRCA1 mutations carriers, any use of oral contraceptives was associated with a modest increase in the risk of breast cancer.

Hence they concluded that women who are carriers of the BRCA1 mutation may have an increased risk for early-onset breast cancer if they first used oral contraceptives before age 30years, or used them for 5 or more years. However, oral contraceptives do not appear to be associated with a risk of breast cancer in BRCA2 carriers. [7]

Kolb.TM., Lichy.j, Newhouse. JH, (2002); Worked on "Comparison of screening mammography, Physical examination, and Breast US and evaluation of factors that influence them". An analysis of 27,825 patient evaluations mammography, US, and physical examination (PE) are each used to screen for breast cancer. The subjects were 11,130 women (mean age, 59.6 years) without signs and symptoms of breast abnormalities. About half the women had fatty breasts and about half had dense breasts. All women underwent screening, mammography and PE, for a total of 27,825 screening sessions.

They found during 1 year of follow up, 246 cancers, were detected in 221 women. Each of the 3 modalities had a high negative predictive value (.9904%), but their sensitivities differed dramatically. PE alone was the

least sensitive (27.6%) but the most specific (99.4%). Screening US alone detected non palpable invasive cancer in 42% of women (30 of 71).

They concluded that mammography is a highly sensitive method for detecting breast cancer in women with fatty breasts but not for detecting tumors in dense breasts. Performing screening US in women with dense breasts improves the detection of breast cancer compared with mammography and PE alone.[4]

Michaelson j, Satija. S, Moore. R, et.al. , (2002); studied "The Pattern of Breast Cancer Screening utilization and its Consequences". A population of 59,899 women who underwent 196,891 mammograms between January 1990 and February 1999 was studied. A total of 604 invasive breast tumors was found. Another 206 invasive breast tumors were found clinically during this period in another 206 women who had no record of a previous mammogram. Additional information was available on screening of women from March 1999 through May 2001.

They found 50% of women who underwent screening did not begin that screening until age of 50 years. Even though 25% of invasive breast tumors were detected in women who were younger than 50 years.

Hence they concluded that many patients didn't comply with American cancer society recommendations for annual screening beginning at age of 40. As a result, nearly 50% of invasive tumors emerged as larger and thus potentially more lethal palpable masses. [6]

Hites. R. et.al. (2004); found "Farm Raised Salmon containing more toxin than wild Salmon". They collect more than 700 salmon samples from sea food wholesalers and retailers in several cities around the world, to see the four common toxins (PCB, dioxin, toxaphene and dieldrin) in the fish sample, which are suspected to cause cancer. They found that farmed salmon had more toxins than the wild salmon and conclude that people should eat farmed salmon, not more than once a month, to avoid risk from the cancer causing toxins they contain, but the wild salmon is safe to eat. [3]

Darbre. D.P, et.al., (2004);Worked on "Chemical used in Deodorant Found in breast cancer tissue". The researchers used laboratory techniques called chromatography and spectrometry to see if 20 samples of breast cancer tissue contain parabens.They found, six different kinds of parabene in the breast cancer tissue samples. All of the samples contained some parabens. The average concentration of all types of parabens in the samples was about equal to the amount that had prompted breast cancer cells to grow in test tubes.

Hence, they conclude that certain chemicals - called – parabens- used in foods, cosmetics, and medicines were present in samples of breast cancer tissue. They suggested that these chemicals might make their way into breast tissue from outside sources and, once accumulate in levels high enough to trigger the growth of breast cancer cell. [2]

1.3 OBJECTIVE

- Study the age group suffering with breast carcinoma.
- Study the awareness level about physical examination and screening of breast for any abnormality among studied sample.

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1.4 METHODOLOGY

The study was undertaken to assess the "AWARENESS LEVEL, SELF EXAMINATION AND SCREENING FOR BREAST CARCINOMA AMONG FEMALE PATIENTS OF KASHMIR," by purposive sampling on 100 subjects who were attending the Radio-oncology OPD of Sheri-Kashmir Institute of Medical Sciences (SKIMS) and SMHS hospital of Government Medical college Srinagar (GMC).The structured questionnaire and interview schedule were used to collect data. To assess the stage of breast cancer "TNM classification was used given by American Joint committee on cancer, 1992." The data was analyzed by percentage.

1.5 RESULTS AND DISCUSSIONS

Table: 1 Distribution of BCP'S according to their age.

Age in years	Frequency	Percentage
30-40	32	32%
40-50	42	42%
50-60	17	17%
≥60	9	9%
Total	100	100%

Table 1 shows; among the studied group of females 42% of women were in the age group of 40-50 years, 32% in 30-40 years. There were 17% respondents from age group of 50-60 years and only 9% were in ≥60.

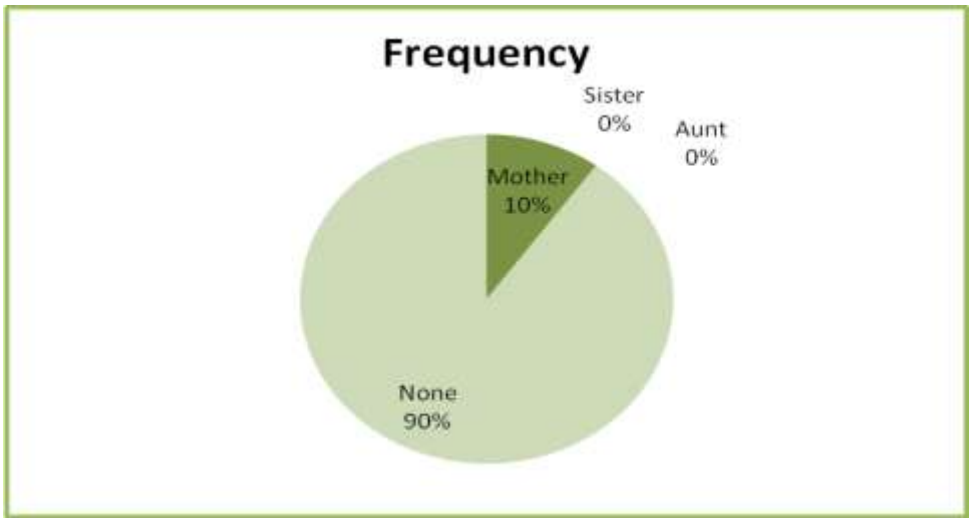

Figure 1: Distribution of BCP's family history of breast Carcinoma

Fig. 1 shows that 90% of the females had no family history of Breast Carcinoma, but some of them had carcinoma of different organs (colon, rectal, liver), 10% of females had the family history of carcinoma, but not of breast.

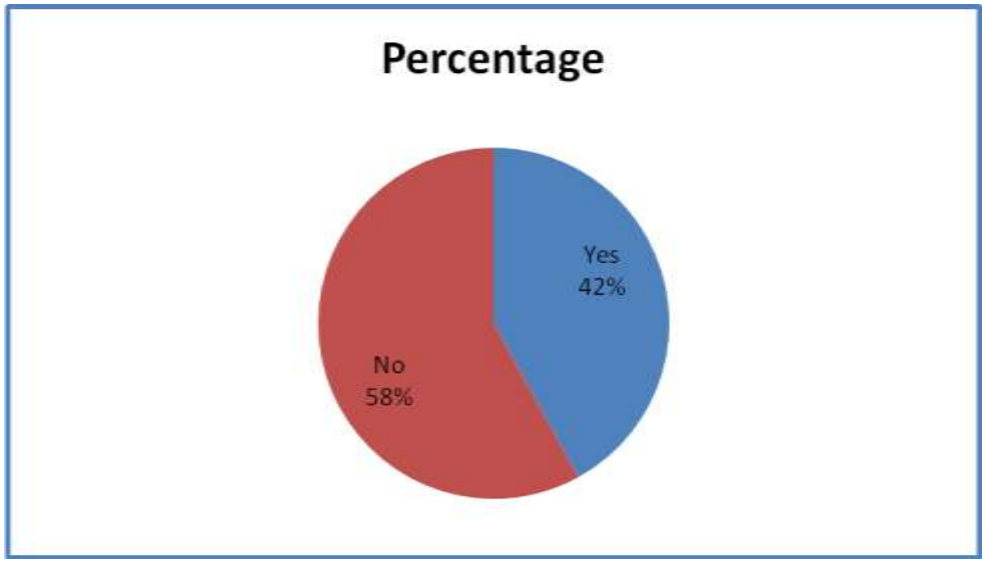

Figure 2: BCP's self examination before detection of Breast Carcinoma.

Fig. 2 shows, 58% of females had never self examined her breasts, while 42% had examined her breasts during bathing, clothing ,most of them were made aware by doctors on TV health shows and some of them had redness and pain in breast due to which they examined their breasts.

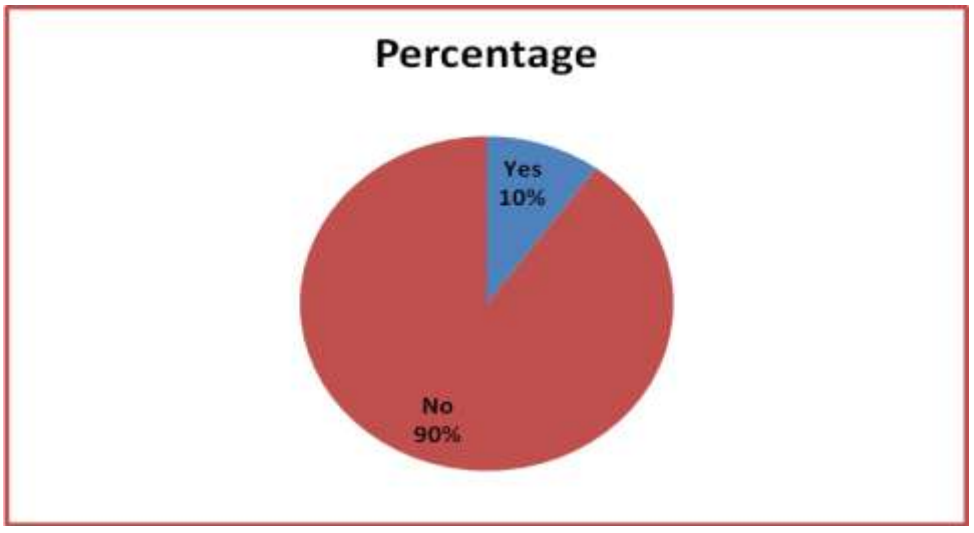

Figure 3: Distribution of awareness of mammography

Fig. 3 shows, 90% of females were not heard about mammography and hadn't gone through it before detection of carcinoma, whereas, 10% of females had mammogram and were aware before detection of carcinoma.

Scintimammography (molecular breast imaging). In this test, a slightly radioactive drug called a **tracer** is injected into a vein. The tracer attaches to breast cancer cells and is detected by a special camera. This technique is still being studied to see if it will be useful in finding breast cancers. Some doctors believe it may be helpful in looking at suspicious areas found by regular mammograms, but its exact role is still unclear. (American cancer society) . [9]

Table 2: Distribution of BCP's stage of Breast carcinoma

Stage of Breast Carcinoma			Frequency	Percentage
Stage I	$T_1N_oM_o$	5	7	7%
	$T_1N_xM_x$	2		
Stage II A	$T_1N_3M_x$	2	8	8%
	$T_2N_xM_x$	6		
Stage II B	$T_2N_1M_x$	19	38	38%
	$T_2N_1M_o$	19		
Stage III A	$T_3N_oM_x$	2	23	23%
	$T_3N_xM_x$	13		
	$T_3N_2M_x$	8		
Stage III B	$T_4N_1M_o$	2	10	10%
	$T_4N_xM_x$	2		
	$T_4N_2M_o$	2		
	$T_4N_3M_x$	2		
	$T_xN_{19}M_x$	2		
Stage IV	$T_2N_1M_1$	8	14	14%
	$T_2N_2M_1$	6		
Total			100	100%

Table 2 shows that 38% of the females were in Stage II B of Breast Carcinoma, and 23% in stage IIIA, 14% of females were in stage IV having metastasis of different parts like skeletal, liver, lung, one had right sarco iliac joint and left half of S1 vertebrae metastasis. At this stage recovery is difficult. 10% of females were in stage III B. The patients in (Stage III C) $T_4N_3M_x$ had lymph oedema, which made her inoperable , she was receiving chemotherapy before surgery.

Another patient had lymph node metastasis with skin involvement, she was in stage IV, 8% of females were in stage IIA, 7% in stage I. In stages I and II recovery is possible, if the treatments are followed strictly.

II. CONCLUSION

Awareness about breast self examination were found to be very less and patients hadn't heard about mammography before breast carcinoma detection. In1960's Greeks followed by the Japanese had longest life expectancy in the world. The traditional Greek diet consisting of a high intake of vegetables and fruits, nuts, olives, fish, cheese and cereals with moderate amounts of wine was associated with very low rates of breast cancer. The diet contain high amount of vitamin C, Vitamin E, ß-carotene, selenium and other phytochemicals. The relationship between diet and disease in Japan is more complex. The Japanese diet is low in fat, high in carbohydrates, devoid of dairy foods and rich in soy food, and for this reason the Japanese today enjoy the longest life-span in the World, with much lower rates of all disease including breast cancer than many other countries.

Avocados are one of the great cancer fighting foods, rich in a multiplicity of nutrients, including many potent anti-oxidants and phytochemicals as well as vitamins . One cup of Avocados contains as much as 30 percent of daily fiber intake as well as significant amounts of Vitamin K, Potassium, Folate, and Vitamin B6 all important to normal healthy cell function and cancer prevention.

Adding an avocado to your diet several times each week will provide a wide variety of nutrients that show compelling cancer fighting properties. As Hippocrates, the Father of Medicine, said, "Let your food be your medicine." [10]

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