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## The Profile of 200 Patients with Breast Mass

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### Abstract:

**Objective:** To study the occurrence of malignancy in breast masses and detect the possible associated factors.

**Patients & Methods:** A cross-sectional study was performed on 200 female patients with breast mass, they were treated in Tikrit Teaching Hospital during period from January 2004 to the may 2006, each patient was subjected to full detailed history, clinical examination and investigation.

**Results:** In our study there were 200 female patients presented with palpable breast mass, age ranged from 18-70 year with mean age 44year, benign lesion was detected in 160 (80%) patients with age ranged 20-50year and mean age 35year, while malignant mass was detected in 40 (20%) patients with age ranged 30-70 year and mean age 50 year.

-Most risk factors occur in patients with obesity, positive family history, female used contraceptive drugs and non breast feeding mother premenopause and early menarche state.

-Because of delay in seeking medical advice, 20 (50%) patients of breast cancer cases in our study involved in stage II.

-Regarding pathological type: in our study invasive ductal carcinoma it is most common type breast cancer (70%).

-Fine needle Aspiration (F.N.A) cytology could be consider as highly sensitive and specific for breast mass but excisional biopsy still consider the golden stander test .

**Conclusion:** Obese patient with positive family history, contraceptive pill user, non breast feeding. pre menopause state, early menarche represented the most associated factors in this study.

**Keywords:** Occurrence of malignancy, breast mass, related factors.

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### Introduction:

**B**reast cancer is the commonest cause of death in middle age women in western countries, In England 1 in 9 women will develop the disease during their life time<sup>[2]</sup>.

-Many clinical trial and the observation of surgeons and radiotherapist over the past 25 year have conclusion that at time of diagnosis, the breast carcinoma is a systemic disease with small non-detectable secondary growth(micro-metastases) already present else where in the body<sup>[3]</sup>.

-Experience shown that it has never occurred before mature development of the breast, rarely before age 20 years and unusual before age of 30 years<sup>[2,3]</sup>.

-A palpable mass in a women's breast represent potentially serious lesion and requires evaluation by history taking, physical examination and through investigation<sup>[2,3]</sup>.

- For any women who seeks help for a breast mass, the first step is to reach a correct diagnosis, the diagnosis of breast cancer carries with it a particularly a devastating psychological effect because the patient has to deal with potentially life threatening diseases [3,4].

-For many years, surgeons have recognized that effective local surgery for breast cancer does not care many patients, event though it may eradicate the local disease, 3/4 of node positive and at least 1/4 of node negative patients will relapse at 10years intervals and most will eventually die from the disease<sup>[5,6]</sup>.

It is Now thought that breast cancer most often a systemic disease, by the time that tumour is

palpable, there for the only future hope for improving in survival lie in early detection before the tumour has spread and lie early systemic therapy aimed at Killing undetecting small group of cancer cell<sup>[2,5,7]</sup>.

### Related Factors:

Several factors have been identified that can increase the risk of developing cancer of the breast:-

#### 1-Reproductive history:-

Nulliparous women, early menarche and late menopause increase risk of developing breast cancer.

#### 2-Family history:-

In women who have a first degree relative with breast cancer there is approximately 2-3 fold increased risk of breast cancer than the general population.

Patient with breast cancer and have positive family history for the disease are generally younger and have a higher frequency of bilaterally than patient with negative family history.

#### 3- Diet and obesity:-

Dietary fat and obesity are significant causative factors in breast cancer.

4- Oral contraceptive and exogenous hormones increase the risk of breast cancer in younger women below 35 year.

**5-Age:-**

Breast cancer is almost unknown in the prepubertal female and rare under age of 20 year, from 20 year on ward there is gradual increasing incidence which reaches Plateau between the age 45-55 year and this period reflects the effect of a changing hormonal pattern in women at this time. There are a new T.N.M. classification and stage of breast cancer<sup>[1]</sup>.

**Patients & Methods:-**

Cross-sectional study was carried out among 200 female patients with a palpable breast mass who treated in breast out patients clinic in Tikrit Teaching Hospital during period from January 2004 to the May 2006, their age ranged from 18-70 year with mean age 44 year, each patient subjected to full detailed history, clinical examination and investigation.

Detailed history which concentrated on age, marital state, occupation, number of children, type of feeding for children, uses of contraceptive pills, date of menarche, date of menopause, previous trauma or disease of breast and family history of breast cancer.

Physical examination also was done, then the patients were subjected to ultrasound, mammography and F.N.A. cytology, all results were confirmed by biopsy. Data were analyzed by frequency and percentage.

The patients under went modified radical mastectomy (patey's operation) it is a popular modification of the (halsted operation) advice by "patey" in which:- total mastectomy is performed in

continuity with radical axillary clearance to the upper 2/3 of axilla.

Post operative antibiotic and analgesia we give to all patients for seven days while stitches removed after 10-12 days.

- After the operation the arm is supported upon pillow until the wound has healed, when early movement of the arm is encouraged.

- Post operatively we refer the cases to the oncologist to give further management.

**Results:**

The total sample studied include 200 females, age ranged from 18-70 year, with mean age 44 year and majority of patients were between 40-60 years of age.

-Patient with benign lesion were 160 (80%) patients with age ranged from (20-50 year) and mean age (35year).

- While patients with malignant lesion were (40) (20%) patients with age range between 30-70-year and mean age 50 year.

-The study showed that from 200 patients presented as breast masses there were 160 (80%) patients have benign lesion and only 40 patients proved to have malignant mass (20%) (Table 1).

- In patients with benign breast mass, there were 132 (82.5%) patients in pre menopause status and 28 (17.5%) patients in post menopause status (Table 2).

- In malignant cases, 22 (55%) patients are in premenopause status and 18 (45%) patients are in post menopause status (Table 2).

**Table 1: Histopathological reports of breast masses among the study group.**

Lesion	No. of patients	Percentage
Benign	160	80%
Malignant	40	20%
Total	200	100%

**Table 2: Distribution of patients with benign breast and breast cancer according to the menopause**

Breast mass	Menopause state	No. of patients	%
Benign breast	Pre-menopause	132	28.5%
	Post- menopause	28	17.5%
	<b>Total</b>	160	100%
Breast cancer	Pre-menopause	22	55%
	Post- menopause	18	45%
	<b>Total</b>	40	100%

Mammography was done to all patients but in the cancer cases mammography gave positive result in 36 (90%) patients but in 4 (10%) patients give false negative result (Table 3).

Ultra sound study was done in all patients but in the cancer cases, ultrasound gave positive result in 32 malignant (80%) patient and false negative result in 8 (20%) cases (Table 4).

**Table 3: Mammography result in patients with malignant breast mass**

Mammography result	No. of patients	Percentage
Positive result	36	90%
False negative result	4	10%
<b>Total</b>	40	100%

Table 4: Ultra sound result in patient with malignant breast mass.

Ultra sound result	No. of patients	Percentage
Positive result	32	80%
False negative result	8	20%
Total	40	100%

-F.N.A cytology have been done to all patients with breast mass, specially with those with malignant clinical pictures, 35 (87.5) patient had definitive result by F.N.A. cytology, while 3 (7.55%) patients was suspicious result.

-Only 2 (5%) patient of malignant cases showed negative false result was proved malignant by open biopsy (Table 5).

-All the results were confirmed by biopsy (which was considered the golden standard test).

The study showed that 20 (50%) patients of total cases of breast cancer was presented in sage II and 10 (25%) patients presented in sage III while 5 (12.5%) patients presented in stage IV (Table 6).

Table 5: F.N.A cytology results in cases with breast cancer masses.

F.N.A cytology results	No. of patients	percentage
Definitive diagnosis	35	87.5%
Suspicious	3	7.5
False negative result	2	5%
Total	40	100%

Table 6: Distribution of breast cancer stage among the malignant cases.

Breast cancer sage	No. of patients	percentage
Stage I	5	12.5%
Stage II	20	50%
Stage III	10	25%
Stage IV	5	12.5%
Total	40	100%

The histopathological types of breast cancer in 40 specimens of patients were:

- 1- Infiltrative ductal carcinoma seen in 28 (70%) patients
- 2- Medullary carcinoma seen in 6 (15%) patients
- 3- Colloid carcinoma seen in 4 (10%) patients.

- 4- Inflammatory carcinoma seen in 2 (5%) patients (Table7).

Table 8 represent the association between breast cancer and different risk factors (family history, contraceptive pill use, parity, marriage, obesity, breast feeding, age at pregnancy, menopausal state, and age at menarche).

**Table 7: Histopathological types of breast cancer.**

Histopathological type	No. of patients	percentage
Infiltrative ductal cancer	28	70%
Medullary carcinoma	6	15%
Colloid cancer	4	10%
Inflammatory cancer	2	5%
<b>Total</b>	<b>40</b>	<b>100%</b>

**Table 8: Distribution of some related factors among patients with breast cancer.**

Risk factors	Benign breast mass (n=160)		Breast cancer (n=40)		P value
	No	%	No	%	
Positive Family history	15	9.3	10	25	0.008*
Contraceptive Pill user	28	17.5	9	22.5	0.466
Parity: Multipara	135	84.3	22	55	0.0002*
Nullipara	15	9.3	12	30	
Marriage: Unmarried	10	6.2	6	15	0.068
Married	150	93.7	34	85	
Obesity (over body weight)	35	21.8	17	42.5	0.008*
NON breast feeding	18	11.2	15	37.5	0.0001*
Age of pregnancy <20 years	128	80	23	57.5	0.003*
>20 years	32	20	17	42.5	
Menopause state: Premenopause	132	82.5	22	55	0.0002*
Postmenoparuse	28	17.5	18	45	
Age of menarche: <16 years	113	70.6	28	70	0.938
>16 years	47	29.3	12	30	

\*Significant association using chi-square test.

**Discussion:**

The breast cancer remain one of the most prevalent form of malignancy in the female approximately 1% of all cases of breast cancer occur in men<sup>[3,8]</sup>.

Breast cancer may arise from the epithelium of duct system and where from nipple end of major lactiferous ducts to the terminal duct unit which is in the breast lobule<sup>[3]</sup>.

-The incidence of breast cancer unfortunately increasing despite extensive research, no preventive measures has been identified<sup>[9]</sup>.

- Screening mammography has been demonstrated to be of significant value in reducing the number of deaths from breast cancer and should be used in conjunction with breast self examination for all women who have family history of breast cancer and after 45 years of age<sup>[9]</sup>.

-In this study all cancer cases presented as breast mass. There was only 160 (80%) patients from 200 cases of breast masses were benign and 40 (20%) patients proved to be malignant, while in other studies. Were found in Baghdad teaching hospital in 1994 150 patients with breast mass, 60 (40 %) patient have Malignancy. Other study have been done in Trikit Teaching Hospital in 2003 by Dr. Kada Kasam 150 patient with breast mass , 17 (11.3%) patient have malignancy. The difference of results could be related to referring the cases to the special center.

-In present study 20 (50%) patients of breast cancer cases we diagnosed in stage II, 10 (25%) patients seen in stage III 5 (12.5%) patients seen in stage I, late presentation of breast cancer in this study reflects inadequate health education about such condition and poor screening program for high risky group of women.

- Mammography of palpable breast lesion is a diagnostic tool, mammography can detect breast lesion earlier than any non invasive study, also is used a screening procedure for asymptomatic women and routine follow up of risk patients<sup>[10,11,12]</sup>.

- Mammography gave 90% positive result and 10% false negative results this be cause may used mammography as diagnostic and not as screening test, also the type of film used for the exposure most of the time not the standard film and the experience of examiner might be as a factor<sup>[2,3,4,8,13]</sup>.

- Ultra sound showed 80% positive result and 20% false negative result which may be explained by the reading of the results by different radiologists who were variable in their experience in breast radiology.

- F.N.A. cytology can provide a morphological diagnosis of palpable breast mass in an accurate, efficient, in expensive and safe manner. It is diagnosis in 90% of cases<sup>[6]</sup>. in our study showed that (87.5%) of breast cancer cases were positive

result, while (7.5%) were suspicions cases and (5%) of breast cancer are false negative result.

- All the results were confirmed by excisional biopsy of breast mass which was consider the golden standard.

- There is a relationship between oestrogen consumption and breast cancer and female got increase risk of cancer from consumption oestrogen and contraceptive pill and in female take conjugated oestrogen for menopausal symptoms which increase risk of breast cancer<sup>[2,8]</sup>. But this relationship was not found in the sample studies (no significant association).

- The results showed a significant association between breast cancer and family history. Breast cancer occurs more commonly in women with a family history of breast cancer than general population. Genetic linkage analysis studies have revealed that an abnormality frequently exists in the short arm of chromosome No. 17 in these women with mutation in the P53 tumor suppressor gene<sup>[3]</sup>.

- The results showed that a significantly higher percentage of postmenopausal women were with malignant breast cancer than those with benign breast mass. Female with prolonged menstrual activity which increase the incidence risk of breast cancer<sup>[4,8,14,15]</sup>.

-Obese females were significantly more with breast cancer seen the studied sample as it is reported by other as breast cancer is commonly affects women in the developed world, dietary factors may play apart in its causation. There is increasing evidence that there is a link between diets rich in saturated fatty acid and breast cancer and the vitamin C may be protective<sup>[3,13,16]</sup>.

-A significantly higher percentage of nulliparous women were with breast cancer than benign breast mass shown the study as it is reported by other studies in which breast cancer is commonly in null porous women and breast feeding is particular appears to be protective also have first child at early age with late menarche and early menopause appear to be protective<sup>[3,18,17,28]</sup>.

-Late age of pregnancy and non breast feeding also showed significant association with breast cancer<sup>[3,13,18]</sup>.

Japanese breast cancer society express that excisional biopsy was superior to incisional biopsy and that the delay between biopsy and mastectomy should be no longer than 2 weeks but preferably kept within one week, no matter how small a biopsy of breast cancer may be the chance of the cancer cell spreading through the whole body is enhanced and acceptable delay between biopsy and mastectomy must be less than 7 day<sup>[14,17]</sup>.

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