CLINICAL EXAMINATION FOR STARTING SCREENING PROGRAM FOR BREAST CANCER

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Abstract:Background: The leading cause of illness and mortality for women around the world is breast cancer, therefore current study conducted to specify at which age should the women in Iraq subjected to screening program for early detection of breast cancer.Screening program in Iraq include (Clinical examination ;Ultrasound of the breast and Mammography).**Patient and Method:**This is a cross-sectional study of 84 patients during a period of two years extending from first of march 1995 to the 28th of February 1997,The sample study for patients presented to the surgical department at Baghdad, Al-Yarmouk and Al Kadmya Teaching Hospitals. The patients complaint of breast problems (breast mass, nipple discharge, mastalgia) and subjected for triple assessment (clinical examination, ultrasound and mammography) as well as excisional biopsy for histopathological examination.**Results :**Mammogram total number of 84 patients with various types of breast masses. They had a mean age of 20-60 years as shown in (table 1). Appositive family history of malignancy was obtained in (14.3%) of the study sample and (7.1%) were lactating females .of 84 pathologically confirmed cases, 41 patients had fibroadenomas, 15 patients were proved to have breast malignancies, 12 with fibrocystic changes, 7 had breast abscesses, 4 had breast cysts, 2 patients had duct ectasia, and another 2 had inarticulate mass, the remaining patient proved to have intra- mammary lymph node.The final diagnosis used the information available from clinical exam, mammography and excisional biopsy. The most common diagnostic category was fibroadenoma (48.8%) followed by malignancy (17.9%) and fibrocystic breast changes (14.3%).Mammography detects 14 cases (87.5%) of truly malignant breast lesions and only two cases (12.6%) were false positives. The final diagnoses of these two cases were (one case as abscess & the other as fibrocystic changes). In our series, mammography was more sensitive (93.3%) in detecting malignant breast. 41 patients with proved breast cancer occurred in age range between (33–60 years old) with a single woman 33 years old has breast cancer with strong family history of breast cancer (her mother at the age 46 year old and her aunt at age of 57years old) , other cases ranges between (46-60 years old). Benign breast disease distributed between age range (17 – 46 years old females) with fibroadenoma between age range of (17–37 years old) and fibrocystic changes between (21–32). Abscess occurred in age group (24–46).**Conclusion:**97.6% of breast cancer occur in the 4th decade of age and above and the risk increase with increasing age. While it is possible for the breast cancer to occur in the 3rd and even 2nd decade of age but there are strong predisposing factors such as family history and genetic factors ,also mammography is a good method for screening patients for breast cancer especially in women above the age of 40 years old with sensitivity of 93.3% let it the most reliable method of detecting breast cancer in advanced ages.

Keywords: Best Age ; Starting Screening Program ; Breast Cancer ; Iraq

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INTRODUCTION

Breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer death among women in the united states[1]. For 1990, the national cancer institute's (NCI) surveillance, epidemiology and end results program (SEER) reported that the incidence of breast cancer was approximately 109 per 100,000 women[2].

In UK, at least 7% of women develop the disease. In Japan, Africa and South America its incidence is 1/6 of that in the Europe and North America. Breast cancer represent 14% of cancers affecting Iraqis annuaually and the majority are in advanced stages. The geographical variation may reflect differences in diet (particuly high fat diet which promotes cancer formation in animals) and early menarche, marriage, pregnancy and menopause [3]. In addition to being the most prevalent, breast cancer also kills more women from cancer than any other type. Breast cancer caused 684,996 deaths worldwide [95% UI, 675,493-694,633] at a rate of 13.6/100,000 when adjusted for age[4]

The World Health Organization (WHO) states that the foundation of breast cancer policies continues to be improving breast cancer outcome and survival through early detection. For breast cancer, different contemporary medications are prescribed.Breast cancer may be prevented in people who have a higher risk of acquiring it through medical treatment with antiestrogens such tamoxifen or raloxifene[5]

Resource and infrastructural shortages in developing countries make it difficult to achieve the goal of improving breast cancer outcomes through early detection, diagnosis, and treatment[6]

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Aim of the study: This study conducted to specify at which age should the women in Iraq subjected to screening program for early detection of breast cancer.

Screening program in Iraq include

- Clinical examination
- Ultrasound of the breast
- Mammography

PATIENT AND METHOD

This is a cross-sectional study of 84 patients during a period of two years extending from first of march 1995 to the 28th of February 1997.

The sample study for patients presented to the surgical department at Baghdad, Al-Yarmouk and Al Kadmya Teaching Hospitals.

The patients complaint of breast problems (breast mass, nipple discharge, mastalgia) and subjected for triple assessment (clinical examination, ultrasound and mammography) as well as excisional biopsy for histopathological examination.

A specially designed protocol was used to assist in the process in the process of data collection. Information from 84 patients was taken covering the following items:

- Identifying information: age, gender, marital state, occupation and residence.
- Clinical presentation.
- Previous medical and surgical history.
- Relevant family history.
- Previous breast problems and lactation history.
- Drug history.
- Detail of menstrual cycle.
- Physical examination of the patient's breast was performed. The size, location, consistency and mobility of any breast mass were noted, as well as the site of the biopsy scar, asymmetry between the breasts, skin changes or discoloration, nipple discharge, area of thickened skin or peaud'Orange and lymph node status were assessed.
- Laboratory findings, if available were recorded.
- Imaging modality findings (mamo)
- Excisional biopsy findings

PRINCIPLES OF STATISTICAL ANALYSIS

The value of a diagnostic test lies in its ability to detect patients with disease, i.e.(its sensitivity), and to exclude patients without disease i.e. (its specificity). The sensitivity measures the fraction of patients with the disease that will be detected by the diagnostic test in question. As the aim of breast investigation is to discriminate between benign and malignant lesions. It can be expressed as those patients with malignant disease whose test is positive, divided by the total of those patients with malignant disease.

The specificity: measures the fraction of patients expressed as those patients correctly identified as having no disease and it's expressed as thosepatients with benign disease whose test is negative, divided by the total of those patients with benign disease.

The accuracy: is the proportion of all test results, both positive and negative, that are carried.

$$\text{Sensitivity} = \frac{\text{Number of true positives}}{\text{Number of diseased people}} \times 100 = \%$$

$$\text{PPV} = \frac{\text{Number of true positives}}{\text{Number of positive test results}} \times 100 = \%$$

RESULTS

Description of the study sample:
Mammogram total number of 84 patients with various types of breast masses. They had a mean age of 20-60 years as shown in (table 1). Appositive family history of malignancy was obtained in (14.3%) of the study sample and (7.1%) were lactating females (table 2).

Table 1: distribution of the study sample by socio-demographic variables.

Age in years	No.	%
< 20	5	6
20 – 29	22	26.2
30 – 39	33	39.3
40 – 49	19	22.6
50 +	5	6
Marital status:		
Married	69	82.1
Single	15	17.9

Table 2: frequency distribution of the study sample by positive findings.

(n=84)	No.	%
Positive clinical findings		
Breast mass	47	56.0
Tenderness	32	38.1
Breast discharge	6	7.1
Nipple retraction	3	3.6
Positive history		
Family history of malignancy	12	14.3
Lactation	6	7.1
Total	84	100

FINAL DIAGNOSIS

of 84 pathologically confirmed cases, 41 patients had fibroadenomas, 15 patients were proved to have breast malignancies, 12 with fibrocystic changes, 7 had breast abscesses, 4 had breast cysts, 2 patients had duct ectasia, and another 2 had inarticulate mass, the remaining patient proved to have intra- mammary lymph node.

The final diagnosis used the information available from clinical exam, mammography and excisional biopsy. The most common diagnostic category was fibroadenoma (48.8%) followed by malignancy (17.9%) and fibrocystic breast changes (14.3%), 9table 3 and figure 1).

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Mammography detects 14 cases (87.5%) of truly malignant breast lesions and only two cases (12.6%) were false positives. The final diagnoses of these two cases were (one case as abscess & the other as fibrocystic changes).

In our series, mammography was more sensitive (93.3%) in detecting malignant breast. Gershon-Cohen (1961) [7] (4), Hadi (1988) [8], Egan (1970) [9], reported approximately similar mammographic sensitivities (92%, 88.7%, 85% and 83.3% respectively).

Table 3: final diagnosis of study sample depending on histopathology

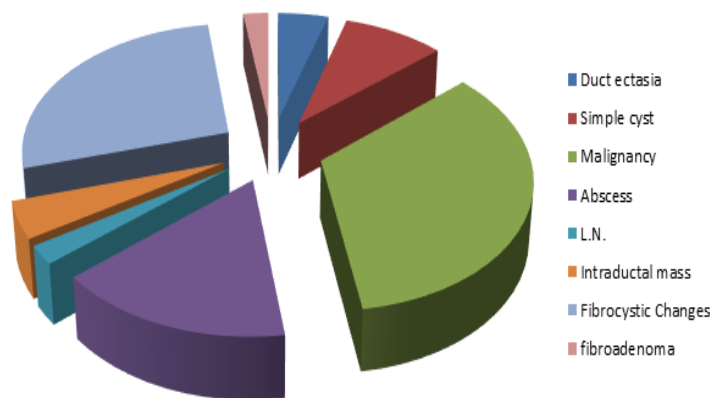| Final diagnosis	No.	%
Fibroadenoma	41	48.8
Malignancy	15	17.9
Fibrocystic changes	12	14.3
Abscess	7	8.3
Simple cyst	4	4.8
Duct ectasia	2	2.4
Intraductal mass	2	2.4
L.N.	1	1.2
Total	84	100

Figure 1: Pie chart showing the relative frequency of different final diagnosis using all available information.

Age distribution for final diagnosis of study sample

41 patients with proved breast cancer occurred in age range between (33–60 years old) with a single woman 33 years old has breast cancer with strong family history of breast cancer (her mother at the age 46 year old and her aunt at age of 57years old) , other cases ranges between (46-60 years old). Benign breast disease distributed between age range (17 – 46 years old females) with fibroadenoma between age range of (17–37 years old) and fibrocystic changes between (21–32). Abscess occurred in age group (24–46) as shown in table 4.

Table 4: age distribution for final diagnosis of study sample

Final diagnosis	Age range (years old)
Fibroadenoma	17 – 37
Breast cancer	33 – 60
Fibrocystic changes	21 – 32
Abscess	24 – 46
Simple cyst	28 – 39
Duct ectasia	30 – 33
Intraductal mass	20 – 31
L.N.	38

DISCUSSION

Breast cancer represents 14% of cancers affecting Iraqis annually[7]. The majority of breast cancer cases (50-80%) are detected in advanced stages and are thus incurable[8]. So early detection is very important in Iraq especially in stage I and stage II (i.e. operable stages). This early detection can be achieved with screening program of the breast, but we should evaluate at which age is suitable for starting screening program.

Screening program in Iraq involve Triple Assessment which include

- Self-breast examination
- Clinical examination by professional
- Ultrasound and Mammographic examination

As well as courses of breast cancer education for all menstruating women about how the women self examine her breast and how identify herself as high risk group patients with clarifying all risk factors for breast cancer and what to do in such cases.

As our shows that there is only one case with breast cancer under the age of 40 with strong family history, setting her in high group patients and suggesting possibility of hereditary genetic factors. Other cases lie in age range between (46-60 years old) , i.e. 97.6% of malignant breast diseases lies above 40 years old and the rest suggesting strong family history and genetic factors can occur under the age of 40. Other benign breast disease lie under the age of 40.

CONCLUSION

97.6% of breast cancer occur in the 4th decade of age and above and the risk increase with increasing age. While it is possible for the breast cancer to occur in the 3rd and even 2nd

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decade of age but there are strong predisposing factors such as family history and genetic factors.

Mammography is a good method for screening patients for breast cancer especially in women above the age of 40 years old with sensitivity of 93.3% let it the most reliable method of detecting breast cancer in advanced ages.

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