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Using mammogram to assessment the breast cancer early detection In Najran province

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Abstract

The Purpose of this study is to assess the role of mammogram scan (MG) in diagnosing breast cancer in Najran-Saudi Arabia. In addition, identifying of accuracy the degree of mammogram in early detection of breast cancer, and determining the most affected side of the breast, and determining if socio-demographic characteristics (gender/age) have any association with the disease. The method used is an observational cross-sectional intuitional-based study, which includes 100 breast cancer patients,

The general Results were as follows: 100 patients underwent mammogram scan (100%).. The most common age group was found to be 36-50 years old (65%), followed by 51-65 years old (19%). Mammogram revealed breast ca in all patients (100%). The majority of patients (61%) had Ca of the right breast, while (33%) had Ca of the left breast, and (6%) had Ca of both sides. No significant association was found between gender and side of Ca breast (p > 0.05). No significant association was found between age and side of Ca breast (p > 0.05). Mammogram revealed accuracy of diagnosis of 100%.

Finally, this study can conclude that mammography scan is а kev diagnostic scan for breast cancer, as it provides early diagnosis of breast and therefore. critical cancer. better treatment strategy and prognosis for breast cancer patients.

* Introduction

Breast cancer is the most common type of cancer for women worldwide. Mammography is typically consider as the most economical screening method, mammogram can often find breast changes that could be cancer years before physical symptoms develop⁽¹⁾. Results from many decades of research clearly show that women who have regular mammograms are more likely to have breast cancer found earlier, are less likely to need aggressive treatments like surgery to the entire remove breast (mastectomy) and chemotherapy, and are more likely to be $cure^{(2)}$. The incidence of breast cancer rises after The highest incidence age 40. (approximately 80% of invasive cases) occurs in women over age 50. In addition to invasive breast cancer, 58,590 new cases of in situ breast cancer they expected to occur among women during 2005. Of these, approximately 88% will classified as ductal carcinoma in situ (DCIS) $^{(3,4)}$. The detection of DCIS cases is a direct result of the increased use of mammography screening. This screening method is also responsible for detection of invasive cancers at a (5) advanced less stage. Mammography is a specific type of breast imaging that uses low-dose xrays to detect cancer early - before women experience symptoms – when it is most treatable .⁽⁶⁾ a mammogram may reveal that a suspicious mass is benign and, therefore, doesn't need to be treated. Additionally, if a tumor is malignant and is caught early by mammogram, a surgeon may be able

to remove it before it spreads and requires more aggressive treatment such as chemotherapy.^(7,8)

* Martial and method:

This study conducted as an descriptive observational cross sectional study, the study was conduct in Najran, Kingdom of Saudi Arabia. Simple random sampling of breast cancer patients in Najran, Kingdom of Saudi Arabia. Breast cancer patients (males and females any age - Saudi or non-Saudi) who underwent mammogram scans from August 2023 to August 2024 and accepted to be included in the study. Data was collected using data collecting sheets. The data collecting sheets included all the objectives of this study. Gender, age, diagnosis and breast side of cancer were record, as well the findings as of the mammogram scans.

* Result of the study

100 patients underwent mammogram (100%). (99%) were females, while only (1%) was a male. The commonest age group was found to be 36-50 years (65%), followed by 51-65 years (19%). Mammogram revealed CA breast in all patients (100%). The majority of patients (61%) had CA of the right breast, while (33%) had CA of the left breast, and (6%) had CA of both sides. No significant association was found between gender and side of CA breast (p > 0.05). No significant association was found between age and side of CA breast (p > 0.05). Mammogram revealed accuracy of diagnosis of 100%.



Figure 1: Showing gender distribution of patients



Figure 2: Showing age distribution of patients



Cancer

Table1: showing co	rrelation between
gender and side	of CA breast.

Valid	Male	Female	Total
Right	1	60	61
Left	0	33	33
Both	0	6	6
Total	1	99	100

 Table 2: Showing correlation between age and side of Breast cancer

Valid	20- 35 years	36- 50 years	51- 65 years	More than 65 years	Total
Right	8	43	7	3	61
Left	5	19	9	0	33
Both	0	3	3	0	6
Total	13	65	19	3	100

* Discussion

In this study we discussion the assessment of using mammogram in breast cancer detection, and this study was conduct in Najran, Saudi Arabia. Breast cancer is the most prevalent form of cancer in women, accounting for one out of every three cancer diagnoses, 100 individuals (100%) had mammograms. (99%) of the participants were female, while 1% were men. 36 to 50 years was found to be the most prevalent age range (65%), followed by 51 to 65 years (19%). The results of this study are very much in agreement with the study of Sherman, S. and Okungu $(2018)^{(9)}$, where they found that the rate of cancer is very high in the world, especially Western countries. In the UK, breast cancer is the most form of the disease. prevalent Although younger people can develop breast cancer, the majority of women diagnosed with it are over 50. One form of cancer that begins in the breast is breast cancer. It may begin in either the left or the right breast. All patients (100%) had ca breasts as detected by mammography. The majority of patients (61%) had ca in their right breast, followed by 33% in their left, and 6% in both. Gender and the side of the ca breast did not significantly correlate (p > 0.05). These results are in agreement with the results of Elobaid Y, Aamir MET and et al, 2021)⁽¹⁰⁾, where they found that breast cancer is a worldwide spread disease. It was also found that a high percentage of people have this disease. Breast cancer develops when cells in your breast multiply and expand out of control, resulting in a lump of tissue known as a tumor. Age and the side of the CA breast did not significantly correlate (p > 0.05). This study is also consistent with the study of Carey, Perou, Livasy, Dressler, Cowan, Conway and Millikan (2016) ⁽¹¹⁾, where the researcher found that there is no significant correlation or agreement between breast cancer and age. In a woman's lifetime, breast cancer affects around 1 in 8 of them.

If it's found early on, there is a good possibility of prognosis. So a mammogram showed a 100% accuracy of diagnosis.

* Conclusion

As overall, this study can concluded that mammography scan is the key diagnostic scan for breast clinical cancer over breast examination with a focus on early detection. The study established that mammography highly is recommended over clinical breast examination and therefore, urgent strategy treatment and better prognosis for patients. However, the analysis of mammography images contains many challenging issues and it is challenging a radiologist to diagnose and determine the site of the pathology.

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