Original Research Article

Study of breast screening with digital mammography of Telangana population

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Abstract

Background: Breast cancer is one of the major causes of mortality and morbidity in Middle aged female in India. Hence it is mandatory to use screening technologies like mammography, tomo synthesis for early detection. **Method:** 82, females aged between 40 to 55 years were having suspicious of malignancy was studied, by screening mammography. **Results:** out of 82, 8 (9.7%) patients screened as malignant and 30 (36.5%) have benign findings in breast. **Conclusion:** This study will be helpful to radiologist, oncologist, for early detection prevention of further spreading in breast malignancy patients and treat efficiently.

Key Words: ACR – BIRDS, biopsy, mortality, metastic, Density.

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INTRODUCTION

Breast cancer is one of the most frequently diagnosed cancers among women and population based breast cancer screening with mammography have been one of Indian and abroad strategies to reduce breast cancer mortality[1]. Breast cancer mortality is declining in most high income countries but under developed countries like India, Bangladesh, Nepal the role of mammography has high influence to detect and prevent the growth of malignancies[2,3]. Since 20-30 years of mammography screening, the incidence rates of advanced metastatic breast cancer have remained stable, but different states and countries have different data's regarding benefits of mammography[4]. Hence screening of mammography has been carried out in tertiary hospital patients who represent real Indian health scenario.

MATERIAL AND METHOD

82 females aged between 40 to 55 years regularly visiting radiology department of mediciti Institute of Medical sciences. Ghanpur, Medchal-501401. (Telagana)

Inclusion Criteria: The patients having tenderness in breast with having suspicious of malignancy were included in the study.

Exclusion Criteria: The female having pregnancy, HIV positive, were excluded from the study.

Procedure: Every patient history was studied in detail. Majority of the patients belonged to middle socio-economic status. All patients were explained about the procedure and safety of mammography in the x-rays used in the procedure. After routine blood examinations, Allegers digital mammography machine was used to carry out bilateral mammography with application of appropriate compression farces. Cranio-caudal and media-lateral oblique views were taken for both breasts in every woman using the mode of Automatic exposure control (AEC). The procedure was carried out as per the guidelines of ACR-BIRDS (American College of Radiology Breast imaging reporting data system). Complimentary sono

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mammography was also performance using a GE logiq 56 machine. Every patient was made to lie in supine position with adequate exposure. The ipsilateral shoulder was slightly elevated to flatten the breast by placing a pillow underneath the shoulder. A-7.5 Mega Heartz (MHz) linear probes were used to scan the breast radically in cloak wise direction. The auxiliary region was also scanned for any enlarged lymph nodes. The findings were tabulated to differentiate benign and malignant findings. Moreover biopsy was done to confirm the malignancy. Duration of study was July-2018 to June-2020.

Statistical analysis: Were done in SPSS soft-ware computer.

OBSERVATION AND RESULTS

Table 1: Study of composition of breast in mammography 15 (18.2%) had completely fatty, 40 (48.7%) had scattered fibro glandular densities, 19 (23%) had heterogeneous density, 8 (9.7%) had extreme dense.

Table 2: Classification of findings as per the guide lines of ACR-BIRDS 16 (19.5% BIRDS-1, 29 (35.3%) BIRDS-2, 30 (36.5%) BIRDS-3, 6 (7.31%) BIRDS-4, 1 (1.21%) BIRDS-5.

Table 1: Study of Breast composition on Mammography

Sl. No	Composition of Breast	No. of patients (82)	Percentage %
1	Completely fatty	15	18.2
2	Scattered fibro glandular densities	40	48.7
3	Heterogeneous density	19	23.1
4	Extremely dense	08	9.7

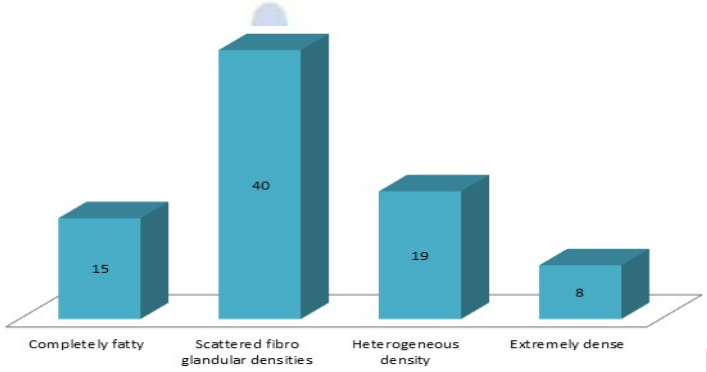

Table 1: Study of Breast composition on Mammography

Table 2: Classification as per the guide lines of ACR BIRDS

Sl. No	ACR BIRDS Classification	No of patients (82)	Percentage %
1	BIRDS-1	16	19.5
2	BIRDS-2	29	35.3
3	BIRDS-3	30	36.5
4	BIRDS-4	06	7.31
5	BIRDS-5	01	1.21

(ACR-BIRDS=American College of Radiology Breast Imaging reporting and data System)

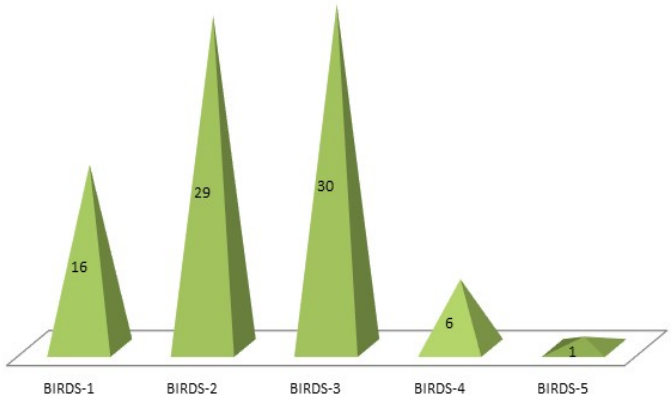

Table 2: Classification as per the guide lines of ACR BIRDS

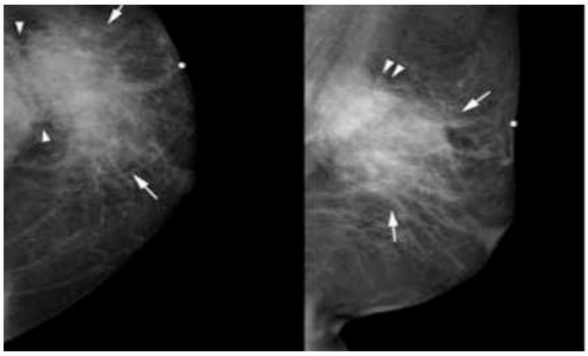

Figure 1: Medio-lateral oblique and cranio-caudal mammographic views of the left breast completely fatty mass with insignificant margins and located in the upper outer quadrant, which appeared to infiltrate the pectoral muscle (arrowheads) and retract the overlying skin

DISCUSSION

In the present study, breast screening with digital mammography in Telangana Population. The study of breast composition on completely fatty, 40 (48.7%) had scattered fibro glandular densities, 19 (23.1%) had heterogeneous densities, 08 (9.7%) had extremely dense (Table-1). The classification as per the assessment of ACR-BIRDS 16 (19.5%) had BIRDS-1, 29 (35.3%) had BIRDS-2, 30 (36.5%) had BIRDS-3, 6 (7.31%) had BIRDS-4, 1 (1.21%) had BIRDS-5, (Table-2). These findings are more less in agreement with previous studies[5,6,7]. In the present study the findings of malignancy were 8 (9.7%) which show extremely dense view in mammography study and 30 "(36.5%) were assumed as benign as per the guide lines of ACR-BIRDS. No literature in English available to know the etiology of breast cancer it could be exposure dust, or unbalanced diet, stress and strain lifestyle. It can't be denied that, majority of Indian women are suffering with obsessive Compulsive disorder (OCD). It leads to variations in the secretion of neuro-transmitters and impaired hormone secretion too. But HRT (hormone – replacement therapy) is a topic of great debate because section of hormone is spontaneous or autonomous could be due to environmental factor hence it is un-wise to correlate HRT with prevalence of Malignancy[9]. Hence WHO has reported 20% female i.e. one in five (1:5) are suffering with breast malignancies in India and abroad[10] Indirect features suggesting breast cancer on digital mammograms is architectural distortion skin thickening and nipple retraction[11]. Although the breast cancer is idiopathic but early diagnose can help to prevent mortality and morbidity.

SUMMARY AND CONCLUSION

The present study of breast screening with digital mammography will be quite helpful to decrease they morbidity and mortality in adult females as it idiopathic disease. This study demands to create awareness among the females by medico-social workers, Para-medicos regarding symptoms of breast – malignancy so that, early approach to clinician will be easy to diagnose and prevent spreading of malignant cells. Moreover government must install mammography instrument in every district hospital so that, lower and middle socio-economic female can avail the screening of mammography facility.

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