INCIDENCE OF INVOLVEMENT OF RETROAREOLAR DISC IN MODIFIED RADICAL MASTECTOMY

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Introduction

The retroareolar disc, also known as the nipple-areola complex (NAC), represents a structurally and functionally significant region of the breast anatomy. Situated at the apex of the breast mound, the retroareolar disc encompasses the nipple, areola, and surrounding pigmented skin. This complex structure plays a crucial role in both the aesthetic appearance of the breast and the physiological processes of lactation and nipple sensation

In the context of breast cancer, previous studies have explored the role of retroareolar disc involvement as a prognostic factor and potential site of tumor dissemination. Research findings suggest that retroareolar disc invasion by malignant cells may confer an increased risk of local recurrence and distant metastasis, highlighting the importance of thorough evaluation and targeted therapeutic interventions in affected individuals. Additionally, investigations into the molecular and genetic characteristics of retroareolar disc-associated breast tumors have provided valuable insights into the underlying mechanisms driving disease progression and therapeutic resistance, paving the way for the development of novel targeted therapies and personalized treatment approaches.

Aim of the work

The aim of this study was to correlate the clinical and radiological criteria and features of the breast cancer patients with the involvement of the retroareolar disc

Patients and Methods

This study included 50 female patients who had pathologically proved breast cancer and scheduled for modified radical mastectomy for which, they were admitted in the Surgical Oncology Unit, Gamal Abdel-Naser Hospital.

All those female patients were undergoing Modified Radical Mastectomy and have contraindication to Breast Conservative Surgery. But, Patients who were candidates for breast conservation, Inflammatory breast cancer, retroareolar lesion with nipple retraction, locally advanced breast cancer with no response to neoadjuvant chemotherapy, radiologically or clinically involved retroareolar disc or patients refusing to be involved in the study, all those patients were excluded.

They underwent a comprehensive workup as follows: Firstly, thorough history-taking was conducted to gather information. Subsequently, a full clinical examination was performed with detailed assessment of the breasts. Imaging studies were employed, consisting of mammography and ultrasound of both breasts to provide additional information regarding tumor characteristics. Core tissue biopsy was performed for histopathological assessment and biological sub typing of the breast cancer, which was crucial for determining the appropriate treatment strategy and predicting prognosis. Data were fed to the computer and analyzed using IBM SPSS software package version 20.0**.** **(**Armonk, NY: IBM Corp**)** Qualitative data were described using number and percent.

Results

Table: Comparison between the two studied groups according to different parameters.

	Total (n = 50)		Retroareolar disc involvement				Test of sig.	p
			No (n = 32)		Yes (n = 18)			
	No.	%	No.	%	No.	%		
Axillary LNS involvement								
Yes	50	100.0	32	100.0	18	100.0	–	–
No	0	0.0	0	0.0	0	0.0		
Malignant LNS number								
Less than 4	28	0.56	27	84.4	1	5.56	χ^2= 33.016*	0.001*<
4_10	22	0.44	5	15.6	17	94.44		
Hormonal receptor status								
Positive	46	0.82	30	93.8	16	88.9	χ^2= 1.172	FEp= 0.530
Negative	4	0.8	2	6.3	2	11.1		
HER status								
Expressed	11	22.0	9	28.1	2	11.1	χ^2= 1.943	FEp= 0.287
Not amplified	39	78.0	23	71.9	16	88.9		
Type of breast cancer								
DCIS	8	16.0	1	3.1	7	38.9	FET= 10.505*	0.004*
IDC	37	74.0	27	84.4	10	55.6		
LCIS	1	2.0	1	3.1	0	0.0		
ILC	4	8.0	3	9.4	1	5.6		
Tumor site							3.835	FEp= 0.075
UOQ	42	0.84	26	81.3	16	88.89		
UIQ	8	0.16	6	18.8	2	11.1		

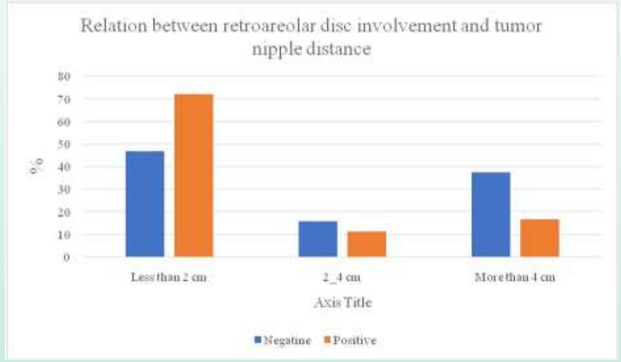

Figure: Relation between retroareolar disc involvement and tumor nipple distance

Conclusion

The study reveals that retroareolar disc involvement is a significant concern in breast cancer patients undergoing MRM. Key factors associated with this involvement include age, tumor size, distance from the nipple, lymphovascular invasion, smoking, and TNM staging. DCIS and IDC types are more likely to involve the retroareolar disc, while hormonal receptor status and HER2 status do not significantly impact involvement. These findings underscore the importance of thorough preoperative evaluation and consideration of these factors in surgical planning to manage retroareolar disc involvement effectively.