

Original Research Article

Evaluation of result of skin-nipple sparing mastectomy in Baghdad Teaching Hospital and Dijla Private Hospital

Sabah Noori Abdulraheem Al-Khazaali*, Rafea Jasim Hussein Al-Shammari

Department of Surgery, Baghdad Teaching Hospital, Baghdad Medical City, Baghdad, Iraq

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*Correspondence:

Dr. Sabah Noori Abdulraheem Al-Khazaali,
E-mail: baghdad.teaching.hospital@outlook.com

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ABSTRACT

Background: Skin-nipple sparing mastectomy and immediate breast reconstruction by silicone implantation has become increasingly popular as an effective treatment for patients with breast carcinoma. The aim of this study was to evaluate the results of skin-nipple sparing mastectomy.

Methods: Records of twenty-seven patients with operable breast cancer who had skin-nipple sparing mastectomy and immediate breast reconstruction between June 2009 and June 2011 were reviewed. Patients and tumor characteristic, type of reconstruction, post-operative complication, aesthetics, results and incidence of recurrence analyzed.

Results: Mean age of 37 patients, aged 25 to 48 years old. Regarding the clinical feature, the size of mass <3 cm in 70%, the site of mass in upper outer quadrant in 62%, no case of skin changes and/or nipple changes. There are two cases of all patients which fixed to underlying tissues about 63% of cases are grade II, stage II and 37% are grade I, stage I. The results of follow up of the procedures are: seroma developed in 14%, infection 3.5%, skin necrosis 7%, local recurrence was zero for follow up for more than one year, about 63% received chemotherapy.

Conclusions: S.N.S.M. and immediate breast reconstruction with silicon implantation for selective case of CA breast is associated with low morbidity and low rate of local recurrence and good aesthetic result with patient satisfaction.

Keywords: Breast, Cancer, Mastectomy, Nipple, Sparing

INTRODUCTION

In the past 60 years, the principles of surgical managements of breast cancer have undergone an enormous change.^{1,2} During Halstedion era which lasted many years, radical mastectomy was treatment offered for CA breast. Once active treatment is completed, some women celebrate, others become anxious about recurrence and feel they have lost a proactive shield against cancer.³

Researches have also found that some women experience disturbances in the body image, especially if they had a mastectomy, younger patients often report more periods of depression.⁴ Development in the clinical genetics and

improved awareness of other risk factors allow the identification of the women at high risk of CA breast, resulting in group of women who request mastectomy for high risk reduction.⁵

With the suggestion that the behavior of a breast cancer is often the expression of systemic disease present at the time of diagnosis, surgical management of the local disease became more conservative.⁶

The nipple areola complex "NAC" is a vital component of female breast, its psychological and aesthetics importance is perhaps most appreciated in women who have been diagnosed with CA breast. Because the NAC area typically has been included in resection, cosmetic

approaches have involved nipple area reconstruction. Although this approach can give excellent cosmetic result, it has potential disadvantage in the form of loss of nipple sensation, pale color and possible loss of projection as the scar soften over time and need tattoo to provide pigmentation of both nipple and areola.⁷

The development of the skin-nipple sparing mastectomy with immediate reconstruction achieved the goal of radical excision of the tumor with improved cosmetic outcome. In addition, overall survival and local recurrence rate were similar to cases of modified radical mastectomy.⁸

The term subcutaneous mastectomy, originally described by Rice and Strickler in 1951, but the term was first used by Freeman in 1962, both referred to its use in benign disease. At early 1980 a series of clinical trial demonstrated the efficacy of breast conserving surgery as compared to radical mastectomy. The development of this procedure was passed in four periods.¹

- Baseline period (1983-1985)
- Trial period (1985-1987)
- Celebrity period (1987-1990)
- Consensus period (1991-1995).

The term skin sparing mastectomy described by Toth and Lappert in 1991, defined the procedure as subcutaneous mastectomy with preservation of the skin and nipple areola complex in selected cases of breast carcinoma and high-risk reduction with immediate autologous reconstruction or implantation.⁹

METHODS

A prospective descriptive study conducted on 27 female patients, who underwent skin-nipple sparing mastectomy SNSM by different surgeons at Baghdad Teaching Hospital and Dijla Private Hospital from June 2009 to June 2011.

The patients that included in this study are those with breast masses that underwent full history taking and proper examination, proved to be malignant in nature based on clinical finding and supported by ultrasonic, FNAC finding and excisional biopsy, where considered for skin-nipple sparing mastectomy, based on the relative size of the mass <5cm and site of mass in relation to nipple areola complex >2cm from NAC.

Patients with suitable size and site of mass where included in a study and subjected for thorough staging procedure including CXR, U/S of breast and axilla, Abdominal U/S, we select patients with stage I, II, grade I, II for this procedure. The technique was under G.A., through an endotracheal intubation and the patients in supine position on operating table. Lateral incision in the upper outer quadrant done, opened in layers and encircle the whole breast tissue in a proper plane, medially to

midstream, superiorly to the infraclavicular tissue, inferiorly to 7th to 8th intercostal space and do standard mastectomy with level I and II axillary dissection which was done through same incision, then put the implanted silicone breast on the pectoralis muscles according to the size of the breast which overlapped by skin and subcutaneous tissue and closed in layers is drain. If the patient had previous scar of core needle biopsy or excisional biopsy we can do elliptical incision.

The patients followed up for one year by clinical examination and U/S to exclude superficial and/or axillary recurrence. The data regarding the age, family history, local examination size, site, fixation, skin and nipple changes, CXR, abdominal U/S, grade and stage, follow up results: seroma, infection, late necrosis, and recurrence and chemotherapy, all these data arranged in tables.

RESULTS

Twenty-seven S.N.S.M were attempted on 27 patients aged 25 to 48 years old, mean age was 37 More than half of patients were in their 36-45 years of age followed by the younger group (25-36) who constituted 44.4 % of respondents while only less than 4% were older than 46 years of age.

Table 1: Age distribution of the sample.

Age	No.	%
25-35	12	44.4
36-45	14	51.8
46 -55	1	3.8
total	27	100

The size of the tumour is presented below. It is shown that majority of the tumour were in the size range of 2.1-3 cm. Around 29.6 % were in range of 1-2 cm while 11.2% were of a size larger than 4 cm. Overall, the size of the mass was less than < 3cm in 70% of cases (19 patients out of 27) (Table 2). The site of the mass in upper outer quadrant in 62% (17 patients out of 27).

Table 2: Distribution of tumour size and presenting clinical feature.

Size cm	No.	%	Sign	No.	%
1-2	8	29.6	Skin changes	25	92.6
2.1-3	11	40.7	Nipple changes		
3.1-4	5	18.5	Fixation pectoralis fascia	2	7.4
4.1-5	3	11.2			
Total	27				

Except for two cases of all patients who had lesion fixed to the underlying tissues, there was no case of skin changes (peudorange and ulceration), and/or nipple changes (retraction or discharge) (Table 2). In regard to grade of disease among the sample, about 63% of cases

(17 patients out of 27) are grade II, stage II and 37% are grade I, stage I (10 patients out of 27) (Table 3).

Table 3: Grade and stage among patients.

Grade and stage	No.	%
Grade I	10	37.04
Grade II	17	62.96
Stage I	10	37.04
Stage II	17	62.96

Regarding the investigations, all of patients undergone FNAC was +ve 100%, and all the patients undergone axillary and breast U/S with result of 63% shows distracted hilum lymph nodes (17 patients out of 27), and 37% with normal LN.

Table 4: Results of follow up.

Follow up	No.	%
Seroma	4	14.8
Infection	1	3.7
Necrosis	2	7.4
Chemotherapy	17	63.0
Lost follow up	3	11.1
Recurrence	-ve	0.0

The results of follow up of the procedures are: seroma developed in 14% (4 patients out of 27), infection 3.5% (1 patient out of 27), skin necrosis 7% (2 patients out of 27), local recurrence was zero for follow up for more than one year, about 63% (17 patients out of 27) received chemotherapy (Table 4).

DISCUSSION

Over the past several years, some women have requested SSM rather than a traditional mastectomy to preserve the appearance of the breast and NAC.¹⁰

There is controversy about the preservation of NAC in breast carcinoma, because of increased risk of recurrence. Studies evaluating occult tumor involvement in the NAC have demonstrated an incidence that range from 5-58%. Because of this, most oncologist and surgeons do not advocate SNSM for every CA breast.^{7,11} However, some women are adamant in their desire to preserve NAC despite the associated risk.¹² It was found that nipple and areola invasion with malignancy is rare events in the presence of early peripherally located tumor with a clinically normal NAC, this incidence dropped to 1.2%.¹³ When we compare this study with other studies, we find the following results:

In this study, the seroma was developed in 14%, while seroma developed in 5% in Paulode Al-Cantra Filho's and 6% in Fersis'.^{14,15} Regarding haematoma, there is no cases of haematoma formation compared with 1% of haematoma formation in Fersis'.¹⁵ The infection rate was

3.5% in this study in comparison with Filho's and Fersis' was 2%.

The skin necrosis was developed in 7% in this study in comparison with 4% in Filho's and 6% in Fersis'. No local recurrence was found in this study although the time of follow up was not enough. The SNSM is technically feasible in spite of the relatively large size of the breast with low morbidity and very satisfactory cosmetic results.

CONCLUSION

Skin-nipple sparing mastectomy (SNSM) and immediate breast reconstruction with silicone implantation for selective cases of CA breast is associated with low morbidity and low rate of local recurrence and good aesthetic result with the patients' satisfaction

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