

A Comparative Study between Flap Tacking Versus Compressive Dressing in Post Modified Radical Mastectomy Seroma Prevention

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ABSTRACT:

Post-mastectomy seroma is still problematic because the causes of its development are still unknown. Following breast surgery, axillary space seromas can cause severe morbidity and postpone the initiation of adjuvant chemotherapy. Numerous strategies, as well as their adaptations, have been used. With the objective for management of post-MRM seroma, this study compares the results of flap tacking and compressive dressing approaches. The prospective randomized study was conducted in Department of General Surgery, Government Medical College, Thiruvallur.

KEY WORDS: seroma, flap tacking, compressive dressing.

I. INTRODUCTION:

In India, the prevalence of breast cancer is rising, and more women undergo modified radical mastectomy (MRM) surgeries as a form of treatment. Few serious complications have been associated to mastectomy. Wound seroma, a collection of serous fluid that contains plasma and/or lymph fluid, is the most frequent complication and has a reported incidence rate of 3% to 85%. (1) Seroma's pathogenesis is not fully understood. Seroma development is attributed to a number of causes. More severe side effects such skin flap necrosis, slowed wound healing, infection, and lymphedema can also be associated with seromas. (2) A promising technique to lower the frequency of postmastectomy seromas is the flap tacking surgery, which plugs the axillary fossa dead space and tacks the mastectomy flaps to the chest wall. A major contributor to morbidity following modified radical mastectomy is seromas (3). After a mastectomy, a low rate of seroma development is linked to early removal of closed suction drains and closing dead space by suturing skin flaps to underlying muscle. The application of this method has significant clinical and economic

consequences for mastectomy patients. Two benefits of the flap tacking surgery are 1) less postmastectomy seromas and 2) fewer postoperative hospital stays and care visits. It would be advantageous to implement any intervention that may shorten the amount of postoperative drainage and its duration. Placing pressure from the outside on the flaps would eliminate any dead space and promote the flaps' adhesions to the muscles underneath (4).

AIM OF THE STUDY:

To assess how routine wound closure and standard post-operative dressings compare to the effectiveness of flap tacking in minimizing postmastectomy seroma.

II. MATERIALS AND METHODS:

The prospective study was conducted in department of General surgery, government Thiruvallur medical college. The duration of study was 1 year from feb 2023 to jan 2024.

Inclusion criteria:

Patient diagnosed with carcinoma breast who underwent modified radical mastectomy.

Exclusion criteria:

Patients undergoing

- Breast Conservation Surgery
- Breast Reconstruction
- Previously operated Patients

Sample size:

Totally 20 patients (10 patients in flap tacking group, 10 patients in compressive dressing group)

Methodology:

All patients with carcinoma breast with stage iia, iib, iiia attending the Department of General Surgery in Government Thiruvallur Medical College from feb 2023 to jan 2024 are

educated regarding their diagnosis and the required surgical management. Data collection was done by an observer who is not participating in the procedure using a structured Proforma which includes the following Sociodemographic variables (age, socio economic status), type of surgery, stage of cancer, duration of the procedure, duration of hospital stay, drain collection from day 1 upto drain removal. Patient information sheet regarding the study process is provided for all patients. Written Informed consent is obtained before enrollment in the study. All patients willing to undergo surgery will be randomly assigned to two study groups – flap tacking group and compressive dressing group.

Procedure:

After MRM Using uniformly spaced 2-0 Vicryl sutures, the skin flaps are secured to the underlying pectoralis major throughout the closure process, and a closed vacuum drain is used to seal the incision. On the wound, compressive dressings are used. On the third postoperative day, the dressing is changed once more using compressive dressings, unless the patient gets wet or has an inexplicable fever that necessitates an early wound

examination. Every day, the amount of seroma is measured out in a standard measuring jar. The amount of seroma is compared with patients flap tacking and compressive dressing. When the daily total quantity was less than 30 milliliters, the drains were removed. Every patient's postoperative drainage volume, total number of days with a drain, and frequency of seroma development were noted.

Statistical analysis :

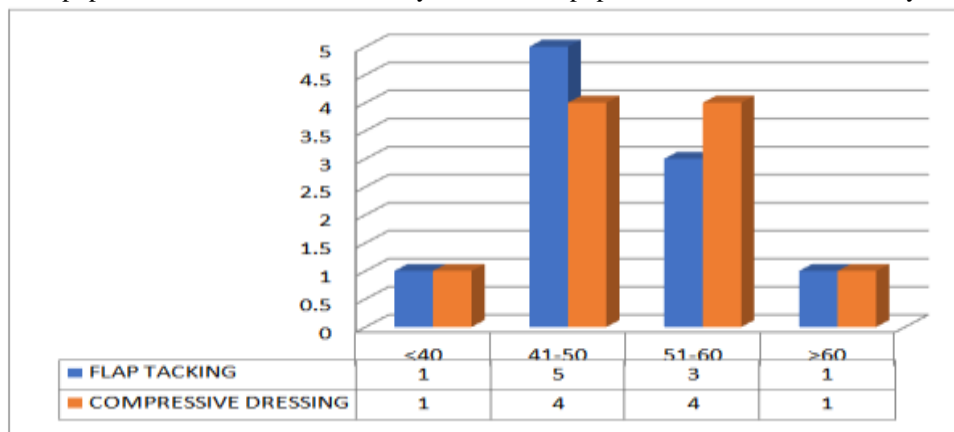
The collected data were analysed with IBM.SPSS statistics software 23.0 Version. To describe about the data descriptive statistics, frequency analysis and percentage analysis were used for categorical variables. To describe about the data descriptive statistics for continuous variables, mean and Standard deviation were used. To find the significant difference between bivariate samples in independent group, the unpaired sample t-test was used. To find the significance in the categorical data, Chi-square test was used similarly if the expected cell frequency is less than 5 in 2x2 tables then Fischer's Exact were used. In all the statistical tools, the probability value less than 0.05 is considered as significant.

III. RESULTS:

Age distribution:

	FLAP TACKING	COMPRESSIVE DRESSING
<40	1	1
41-50	5	4
51-60	3	4
>60	1	1
	10	10

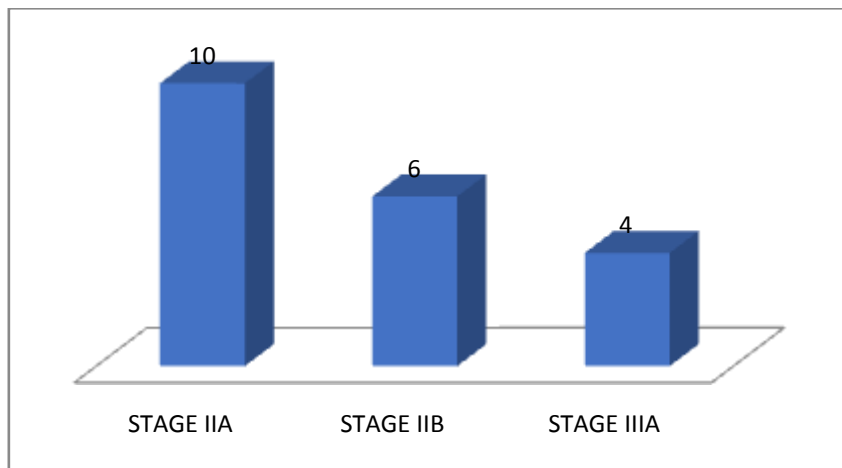
In this study 10% of population comes less than 40years of age, 45% of population comes between 41-50years, 35% of population comes between 51-60years, 10% of population comes more than 60years.



Distribution of Carcinoma breast staging in this study:

	NO. OF PATIENTS
STAGE IIA	10
STAGE IIB	6
STAGE IIIA	4

In this study 50% of population belong to stage IIA, 30% of population belong to stage IIB, 20% of population belong to stage IIIA.

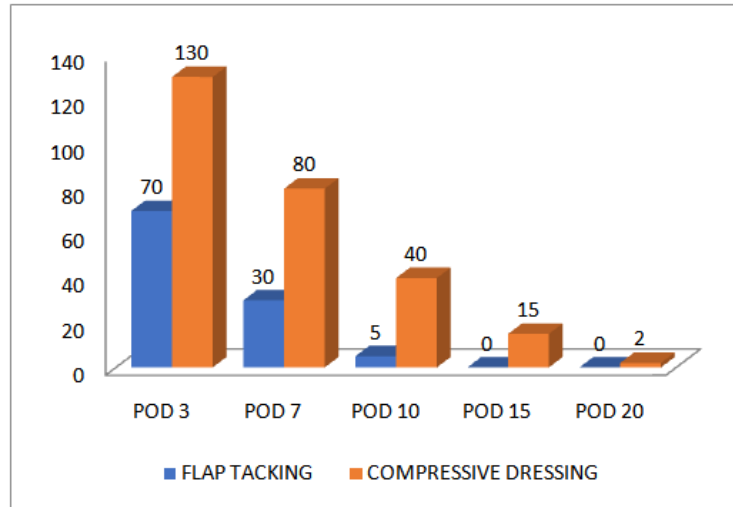


Comparison of average drain output in flap tacking group and compressive dressing group:

	FLAP TACKING	COMPRESSIVE DRESSING
POD 3	70	130
POD 7	30	80
POD 10	5	40
POD 15	0	15
POD 20	0	2

Chi-squ: 17.771, p-value: 0.00136(<0.05) statistically significant.

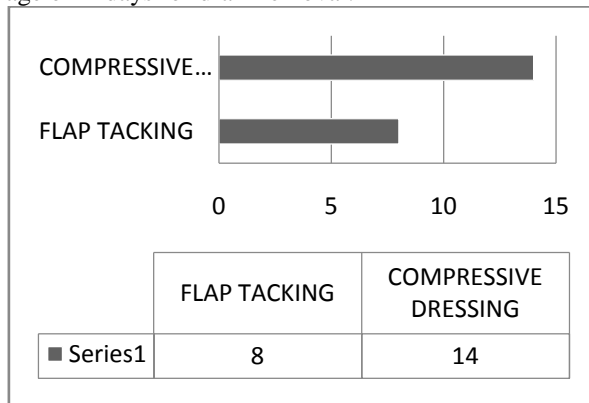
Compare with compressive dressing group flap tacking group has lower amount of post op drain output and seroma.



Comparison of average days for drain removal in flap tacking and compressive dressing group:

FLAP TACKING	COMPRESSIVE DRESSING
8	14

Flap tacking group has average of 8days for post op drain removal when compare with compressive dressing group they has average of 14days for drain removal.



IV. DISCUSSION:

In this study majority of population comes between 41-50 years of age group. When staging the carcinoma majority of study population 50% belong to stage IIa. Compare of post op drain output for flap tacking and compressive dressing group flap tacking group has statistically significant [chi-squ: 17.771, p-value: 0.00136(<0.05)] lower drain output. Comparison of average days for drain removal in flap tacking and compressive dressing. Flap tacking has early drain removal and less seroma formation.

V. CONCLUSION:

The study aims to compare seroma formation between two study groups, flap tacking group and the compressive dressing group in patients with undergoing MRM for carcinoma breast. The results attained are suggestive of statistically significant reduced seroma formation in flap tacking group compare with compressive dressing group.

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