Analysis of the Effectiveness of Globe Incision Mammaplasty in the Treatment of Early Breast Cancer

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Abstract: Objective: To observe the efficacy of different methods in the treatment of early stage breast cancer disease. Methods: 84 patients admitted from 2020.12 to 2022.8 were divided into groups I and II, 42 patients each, who received treatment after conventional breast-conserving and racket-shaped incision mammoplasty, respectively, and compared the surgical treatment of patients between groups. Results: The rates of cosmetic excellence and complications in group II were 95.2% and 7.1% respectively, compared with 73.8% and 35.7% in group I. The differences reached a significant level (X^2 5.825,8.556 respectively, P equals 0.016,0.003 both <0.05). Conclusion: The treatment of early breast cancer patients with racket-shaped incisions for mammaplasty is cosmetically effective and safe, and is worth promoting.

Keywords: Breast Cancer; Racket Incision Mammaplasty; Efficacy Observation

Introduction

Breast cancer has long been the most prevalent malignant tumour among women in China, and the number of patients with the disease has been increasing in recent years, with a trend of lower age. Surgery is the preferred treatment option for breast cancer, and the preservation of the physiological function of the breast and aesthetic enhancement is the goal of surgical treatment[1]. Although traditional breast-conserving surgery can preserve more breast tissue, many patients suffer from localised breast deformation, pain and skin folds after surgery, resulting in unsatisfactory cosmetic breast outcomes. In this paper, 84 patients were selected as data and compared in groups to confirm the efficacy of this procedure, which is reported as follows.

1. Data and methods

1.1 General information

Eighty-four patients diagnosed with early breast cancer from 2020.12 to 2022.8 were selected as the study sample and divided into 2 groups of 42 patients each, with each group as follows.

Group I age range 23-59 years old, TNM stage: 16, 10 and 16 cases of stage I, II and III respectively.

Group II ranged from 22 to 58 years of age, with TNM stages: 14, 13 and 15 cases in stages I, II and III, respectively.

The above information (P > 0.05) was comparable between the two groups of patients.

1.2 Methods

In group I, traditional breast-conserving surgery was performed by removing the tumour and the surrounding normal tissues above the range of 1cm and pectoral fascia through tumour enlargement, without intraoperative suture operation on the residual cavity. The incision plan was as follows: for the tumour in the nipple plane, a curved incision was made along

the Langer

A curved incision is made along the Langer line for tumours in the nipple plane; a radial incision is made when the tumour is at or below the nipple plane.

Group II: A racket incision mammaplasty with a choice of medial and lateral excision, vertical or "J" shaped incision in relation to the location of the tumour. The two areolar incisions are used as the basis for complete excision of the skin between the corresponding rings and complete excision of the tumour, with the non-cancerous glands being re-arranged and the deviated nipple areola being transferred to the central site in time. The axillary lymph was routinely cleared at an angle of 180° from the axillary fold and a drainage tube was placed in a stable manner.

1.3 Observation indicators

(1) Cosmetic breast effect: The assessment was made in terms of breast texture, compliance and skin touch on both sides, etc. The score was 35 out of 35, with excellent, good, fair and poor corresponding to a range of 31-35, 26-30, 21-25 and ≤20 points respectively. Excellent rate = (number of excellent + number of good)/total number of cases in the group x 100%.

(2) Postoperative complications

1.4 Statistical processing

SPSS33.0 software was used to process the data, and the measured and counted data were used, rate (%), X^2 test respectively. Difference detection performance: $P < 0.05$.

2. Results

2.1 Cosmetic effect

There were 33 cases and 7 cases in Group II who met the judgment criteria of excellent and good respectively, with an excellent rate of 95.2%; there were 20 cases and 11 cases in Group I who met the criteria of excellent and good respectively, with an excellent rate of 73.8%. The overall cosmetic effect of Group II was better than that of Group I ($P<0.05$). Table 1.

Table 1 Comparison of cosmetic breast outcomes between the two groups of patients

Group（n）	Excellent	Good	Fair	difference	Excellent（%）
Group II（42）	33	7	2	0	40（95.2）
Group I（42）	20	11	6	3	31（73.8）
X^2	/	/	/	/	5.825
P	/	/	/	/	0.016

2.2 Complications

In terms of postoperative complication rates, Group II was even lower than Group I ($p < 0.05$). Table 2.

Table 2 Comparison of the incidence of complications in patients between groups

Group（n）	Infection of the incision	Poor healing of the incision	Haematoma	Total occurrence（%）
Group II（42）	1	0	2	3（7.1）
Group I（42）	6	5	4	15（35.7）
X^2	/	/	/	8.556
P	/	/	/	0.003

3. Discussion

Breast-conserving surgery is the preferred option for early-stage breast cancer patients. Although conventional surgery can achieve results comparable to total mastectomy and can better preserve the shape of the lower breast, its promotion is limited because the location and size of the tumour can negatively affect the recovery of breast shape and patient satisfaction is poor. In recent years, clinical medical technology has made great progress in the development of minimally invasive plastic surgery and breast conservation combined with treatment techniques in the field of breast cancer disease treatment has been expanding the scope of application, while effectively treating the disease while better meeting the requirements of patients in terms of aesthetics [2].

In this procedure, the tumour is removed and the defect is repaired using plastic surgery and the breast's own glandular tissue, thus ensuring a good appearance of the breast. The incision is made in both areolas, allowing for smooth and complete excision of the peri-areolar tumour and peri-areolar skin, thus demonstrating a high degree of adaptability. It has been reported in the literature that this procedure can assist in improving the symmetry of the left and right breast, reducing the transverse and longitudinal deviation of the nipple and reducing postoperative scarring [3]. In the current study, the rate of excellent cosmetic breast appearance was higher in Group II patients than in Group I, while the rate of postoperative complications was below that of Group I, suggesting that the racket-shaped incisional mammaplasty procedure is more likely to increase the cosmetic appearance of the breast. In addition, traditional breast-conserving surgery allows fibrin and serum to gradually seep into the residual cavity in order to achieve a better cosmetic breast outcome, which controversially causes an increase in residual cavity pressure, which is not conducive to normal postoperative incision healing and increases the risk of associated complications. In conclusion, clinicians faced with early stage breast cancer are advised to undergo early treatment with rachid incision mammaplasty for good cosmetic results and a safe procedure, which is worthy of popular application.

References.

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