The Value of Breast-Conserving Surgery Combined with Neoadjuvant Therapy for Breast Cancer

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Abstract: Objective: To observe the efficacy of different methods in the treatment of breast cancer disease. Methods: A sample of 78 patients attending the clinic from 2020.8 to 2023.1 was randomly selected and divided into groups A and B. Thirty-nine patients each underwent conventional breast-conserving surgery and group B combined with neoadjuvant therapy to compare the effectiveness of treatment between the groups. Results: The overall efficiency of group B vs group A was 94.87% vs 71.79%, a significant difference ($P < 0.05$). Surgery-related indicators were better in Group B than in Group A ($P<0.05$).Conclusion: Early intervention with breast-conserving surgery combined with neoadjuvant therapy is recommended for patients with breast cancer and has demonstrated high clinical value.

Keywords: Breast Cancer; Breast-Conserving Surgery; Neoadjuvant Therapy; Value Analysis

Breast cancer is a malignant tumour disease originating from the epithelium of the breast, and women aged 40 to 55 are the most common group for this disease. The clinical research on the physiology and pathology of breast cancer is becoming more and more advanced, and it has been reported that breast-conserving surgery combined with neoadjuvant therapy can achieve better results in the treatment of this disease. In this paper, we now include data of 78 patients and compare them in groups to confirm the effectiveness of the above combined therapy treatment, which is reported as follows.

1. Data and methods

1.1 General information

The 78 patients included in the study were diagnosed with breast cancer, had definite indications for surgical treatment and cooperated actively with the study. They were divided into two groups of 39 cases each, with each group as follows.

Group A: age range 34-61 years, duration of disease 2-7 months, pathological stage: stage II and III in 14 and 25 cases respectively.

Group B: Age range 32-61 years, duration of disease 3-8 months, stage: 17 and 21 cases each of stage II and III.

The above baseline data of patients were compared between groups ($P > 0.05$).

1.2 Methods

Group A was treated with conventional breast-conserving surgery, i.e. local excision of the tumour site under general anaesthesia, and intraoperative pathological tissue examination was completed quickly. If a certain margin is positive, the resection area should be expanded by about 1 ㎝ to ensure that the cut edge of the lesion is negative.

In group B, the treatment method for breast-conserving surgery is the same as in group A, combined with neoadjuvant therapy, i.e. 75 p.m./㎡ + 600 p.m./㎡ epirubicin, d1. 550 p.m./㎡ cyclophosphamide d2, d8. 450 p.m./㎡, d2, d7. 1 week of continuous treatment as a course of treatment, usually about 3 courses of treatment.

1.3 Observation indicators

(1) Judgment of efficacy: ① remission: the symptoms of breast cancer disease were greatly relieved after treatment and the physical examination results were good; ② partial remission: the symptoms were partially relieved after treatment, but breast swelling and pain and overflow still existed; ③ invalid: the disease performance was not reduced before and after treatment, or the condition deteriorated. The percentage of the number of remission and partial remission in the total number of cases in the group was used to indicate the total effective rate.

(2) Surgery-related indicators: time spent on surgery, first time out of bed, extubation and hospitalization time.

1.4 Statistical processing

SPSS 21.0 software package was used to process the data. When the measurement and counting data conformed to the pattern of normal distribution, t and X^2 tests were used respectively. $P < 0.05$ was regarded as a statistically significant difference in the data.

2. Results

2.1 Clinical efficacy

In group B, 29 cases met the criteria for remission, with a total effective rate of 94.87%; in group A, the corresponding values of the above two indicators were 19 cases and 71.79%, respectively, and the clinical efficacy of group B was better than that of group A ($P < 0.05$), Table 1.

Table 1 Comparison of clinical outcomes between the two groups of patients

Group（n）	Relief	Partial relief	Invalid	Total validity（%）
Group B（39）	29	8	2	37（94.87）
Group A（39）	19	9	11	28（71.79）

2.2 Surgical indicators

Both in terms of surgical time spent and extubation time indicators, Group B outperformed Group A. The difference in data reached a significant level ($P < 0.05$), Table 2.

Table 2 Comparison of surgical index tests between the two groups of patients $(\bar{x} \pm s)$

Group（n）	Surgery time（min）	Getting out of bed for the first time（d）	Extubation time（d）	Length of stay in hospital（d）
Group B（39）	41.25±4.46	3.14±0.62	3.89±0.79	4.32±1.37
Group A（39）	84.27±18.52	4.63±1.33	7.92±1.36	7.85±1.40

3. Discussion

Traditional open surgery for the treatment of breast cancer involves the removal of a large amount of breast tissue, which is difficult to meet the requirements put forward by patients for the aesthetics of their breasts and is not conducive to maintaining their physical and mental health [2]. Breast-conserving surgical treatment preserves the patient's breast, allows selective removal of diseased breast tissue, and precisely clears the axilla and surrounding residual tissue lesions, significantly increasing the aesthetic appearance of the breast while ensuring the treatment effect. The combination of breast conservation and neo-adjuvant chemotherapy can facilitate early recovery without damaging the breast, using a combination

of chemotherapy treatments. Neoadjuvant therapy uses chemotherapy drugs to reduce the size of the breast lump, but in practice the duration of adjuvant treatment is set in relation to the patient's condition, for example, some patients are treated with breast-conserving surgery after 2 courses of chemotherapy, while some patients require longer chemotherapy. In patients with locally advanced breast cancer, neoadjuvant interventions can be downgraded to meet the indications for breast-conserving treatment and increase the safety of breast-conserving treatment [3].

In this study, the time spent on surgery, first time out of bed, extubation and hospital stay were (41.25±4.46) min, (3.14±0.62) d, (3.89±0.79) d, (4.32±1.37) d, respectively, compared to (84.27±18.52) min, (4.63±1.33) d, (7.92±1.36) d, ((7.85±1.40) d, a significant difference, and the total effective rate was higher in group B than in group A, confirming the effectiveness of the combination therapy with the data. The reason for this may be that the neoadjuvant chemotherapy stage allows for real-time assessment of lesion size, anatomical location and depth, etc., which can then be used to consider whether or not to electively operate, and after treatment, the residual tumour status can be assessed in combination with the patient's disease manifestations and imaging findings, which can then present a more objective picture of the treatment effect, reasonably predict the risk of recurrence, etc., and use more effective means to intervene.

In conclusion, early intervention with breast-conserving surgery combined with neoadjuvant therapy is recommended for patients with breast cancer, with definite results and demonstrating high clinical value.

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