Clinical Research about Patients Who Use Lobaplatin During Breast Conserving Surgery

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Abstract. Objective to study the clinical effect of using Lobaplatin in breast conserving surgery. Methods: 40 patients who were eligible for breast conserving surgery were selected, and each group was divided into control group and experimental group. In the experimental group, the application of direct spraying and washing compatibility was applied to Lobaplatin, and the control group was washed with the same amount of physiological saline. After surgery, the blood image, liver and kidney function, digestive tract stimulation and wound healing were compared in the two groups, and the long-term metastasis and the recurrence rate were reviewed. Results No statistically significant difference (P> 0.05) in white blood cells and platelet count, serum creatinine and AST, ALT. The wound healing time was similar in the two groups, and there was no significant difference in nausea, vomiting and diarrhea. The recurrence rate in the experimental group was lower than that in the control group (P<0.05). There was no significant difference in distant metastasis. Conclusion: when using Lobaplatin in breast conserving surgery, there is no obvious side effect, obviously reducing the recurrence rate, it is worth popularizing widely.

Introduction

As a common female malignant tumor, breast cancer surgery remains as the most effective treatment, compared with modified radical, breast conserving surgery curative effect is better, can maintain the appearance of the breast, the postoperative survival in patients with high quality, can be used as a treatment of choice for early breast cancer\cite{1}. Breast conserving surgery postoperative recurrence rate was 4.21%, and 5-year survival rate was 99.16%, the recurrence of the peak concentration 2-3 years after surgery \cite{2}. In order to further reduce postoperative recurrence rate, the concept of local chemotherapy was introduced. Intraperitoneal injection is the new adjuvant therapy, The drugs to be injected must have the following characteristics: (1) the tumor cells were sensitive to the drug, and the IC50 was small; (2) good water solubility; (3) no activation is required; (4) no local irritation (PH value); (5) the action mechanism is clear, which is the non-specific drug of the cell in the same period. In these areas, Lobaplatin showed a clear advantage over other chemotherapy drugs. From 2013 to the end of 2015, 40 cases of breast cancer patients with breast augmentation were selected for the study. The report is as follows.
Materials and Methods

Subjects

Into the group of 40 patients with early breast cancer and tumor size are not more than 5 cm, from nipples were greater than 2 cm, age between 28 and 50 years old, no systemic disease, always healthy body, no external factors affecting wound healing and check inspection results, All patients have diagnosed breast cancer as primary tumor, Indications for breast conserving surgery. Preoperative blood biochemical and cardiopulmonary function was normal, no chemotherapeutic contraindication, no related drug allergy history, no other chemotherapy or endocrine drug therapy. We divided the patients into the experimental group and the control group according to whether or not they were used in the operation of Lobaplatin. Each group of 20 people made the meaningful indexes to be comparable.

Method

After the operation, the experimental group was sterilized with water to rinse the cavity. With the combination of Lobaplatin 50mg/m2 and 2000-2500ml physiological saline, Flush the cavity before closing it, Leave for 15min then attract the aspirator. Before the final suture flap, 50mg/m2 of Lobaplatin was added to 5-10ml normal saline. Fully mixed and sprayed on the tumor bed, underarm and other parts to prevent local recurrence or implant metastasis, in the removal of the tumor and under the armpit drainage tube, after the flap was sutured, the external negative pressure device of the drainage tube was connected. The residual liquid was absorbed, while the control group used the same amount of warm saline to complete the soaking and the spraying process in the operation. The remaining treatment was identical.

Postoperative Blood Biochemistry, Adverse Reactions, Healing and Recurrence and Metastasis

Table 1. biochemical results.

<table>
<thead>
<tr>
<th></th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>After 3 days WBC(×10⁹)</td>
<td>8.5±1.0</td>
<td>8.3±1.1</td>
</tr>
<tr>
<td>After 3 days PLT(×10⁹)</td>
<td>280.3±22.5</td>
<td>276.7±21.6</td>
</tr>
<tr>
<td>After 3 days Cr(μmol·L⁻¹)</td>
<td>77.8±10.2</td>
<td>76.1±9.1</td>
</tr>
<tr>
<td>After 3 days AST(U·L⁻¹)</td>
<td>23.0±7.2</td>
<td>24.2±68</td>
</tr>
<tr>
<td>After 3 days ALT(U·L⁻¹)</td>
<td>30.6±5.3</td>
<td>27.8±5.1</td>
</tr>
</tbody>
</table>

Table 2. Adverse reactions (7 days).

<table>
<thead>
<tr>
<th></th>
<th>experimental group</th>
<th>control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>nausea</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>vomiting</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>diarrhea</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Notch I healing time (day) experimental group 7.4±2.5 control group 6.5±2.5 TC (alin/cyclophosphamide) was adopted after operation 75/600mg/m2,6 cycles, 21 days apart, 2
years after discharge, Follow-up imaging or other examinations, such as PET-CT, were used to check for recurrence and distant metastasis.

Statistical Analysis

SPSS13.0 software package was used to statistical analysis, comparison between group by t test, counting data comparing by $\chi^2$ test.

Result

Security

3 days after surgery, there was no significant difference in bone marrow suppression and liver and kidney function, and the results were not statistically significant ($P>0.05$). There was no statistically significant difference in the incidence of healing time and adverse reactions in the digestive tract ($P>0.05$).

Two-year Recurrence Rate and Distant Metastasis

All patients completed adjuvant chemotherapy; follow up to the end of 2015-2017, the follow-up time was two years after surgery. There was no local recurrence mass and distant metastasis in the experimental group. In the control group, there were 5 local recurrence lumps, the recurrence rate was 2.5%, and the distant bone metastasis appeared in 1 case. Both groups survived. There was a significant difference between the two groups of biennial recurrence rate.

Discussion

The main adverse reactions of Lobaplatin were bone marrow suppression, liver and kidney function and gastrointestinal reaction. In this study, there were no significant differences in the incidence of leukocyte, platelet, serum creatinine and AST/ALT, as well as the incidence of nausea, vomiting and diarrhea. Qadri SS experiment [3] (Cork University Hospital) proved that: After primary tumor resection, local secondary tumors and metastatic lesions were accelerated. Secondary tumors are more invasive than primary tumors. It was proved that the residual lesions were accelerated after surgical resection. Famous animal experiment by Fisher [4](University of Pittsburgh) proved that: The earlier the chemotherapy in the cavity, the greater the influence of cell dynamics on cancer cells, chemotherapy after 3 days of surgery need higher dose than in 3 days (cytodynamic indicators). From a microscopic perspective, standard radical surgery is not possible to eliminate all tumor cells, The detection rate was higher in RT-PCR [5-7]. We found that the experimental group and control group of I healing time there was no significant difference. Therefore, it is safe to spray Lobaplatin in radical surgery. But longer follow-up analysis was needed. All patients were followed up for 2 years, In the control group, there were 5 cases of local recurrence, and no recurrence occurred in the experimental group. In the control group, there was a distant bone metastasis, and no distant metastasis was found in the experimental group. The experimental group was superior to the control group in controlling the local recurrence rate. To sum up, It is safe and effective to use Lobaplatin in breast conserving surgery, it is worth further clinical promotion.
References


