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Research Article

Efficacy of Carboprost Tromethamine Combined with Mifepristone in the Treatment of Uterine Fibroids

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Abstract: The objective of this study was to investigate the clinical efficacy of carboprost tromethamine combined with mifepristone in the treatment of uterine fibroids. A total of 66 patients with uterine fibroids admitted to our hospital between April 2018 and January 2019 were selected as subjects. According to the two different treatment methods, patients were divided equally: The observation group and the control group, each group of 33 people. The oxytocin drug treatment was medicated to the control group, and the prostaglandin tromethamine combined with mifepristone was medicated to the observation group. The treatment effect, adverse reaction, operation, and uterine muscle before and after surgery were observed in these two groups: Tumor tissue progesterone receptor and estrogen receptor levels. The clinical treatment effect of the observation group was 93.94%, and the clinical treatment effect of the control group was 60.61%. The clinical treatment effect of the observation group was significantly higher than that of the control group; furthermore, the incidence of adverse reactions in the observation group in terms of rash, fatigue, nausea, and vomiting was much lower than the control group and could observe a significant difference. Finally, in observation group, the amount of intraoperative blood loss, operation time, and hospitalization time was better than those of the control group. The progesterone receptor and estrogen receptor levels in the uterine fibroid tissue after surgery should also be better than the control group, and it is worth to make a further comparison. Carboprost tromethamine combined with mifepristone is effective in the treatment of uterine fibroids and can be further developed.

Keywords: *carboprost tromethamine; mifepristone; uterine fibroids; clinical efficacy*

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0 Introduction

Uterine fibroid disease is a common disease that occurs in the female reproductive organs and is a benign tumor. The development of uterine fibroids is small in the early stage, and the clinical symptoms of the patients are not very obvious, so both physician and patients often ignore the illness, which hinders the best time to treat the disease[1]. With the development of the disease, the volume of the fibroids gradually increases, and some clinical symptoms of the patients will gradually become obvious, which mainly includes increased menstrual flow, irregular menstruation, and prolonged menstruation. If the patients' fibroids are too large, the patient will be in the situation of oppression which directly leads to anemia and bleeding in patients, and it is necessary to undergo surgery at this stage of development[2]. Under normal circumstances, laparoscopic myomectomy can be used for treatment. This kind of treatment has less trauma to the patient and quick recovery after surgery. It is the common way to treat uterine fibroids in clinical practice[3]. According to relevant researches, the application of carboprost tromethamine and mifepristone in uterine fibroid surgery can effectively improve the surgical results. This study also focused on the treatment of uterus with carboprost tromethamine combined with mifepristone. The clinical efficacy of fibroids was analyzed as follows.

1 Information and methods

1.1 Clinical basic data

At the time of this study, a total of 66 patients with uterine fibroid disease were selected as subjects. All patients were selected between April 2018 and January 2019. According to the two different treatment methods, they were divided into two groups: Observation group and control group. The number of patients in each group was 33 cases. The willingness of all patients and their families was counted before the study began, and all patients and their families agreed and signed the relevant consent form. The age of the observation group ranged from 32 to 53 years old, the median age was 43.16 ± 2.74 years old, and the age of the control group ranged from 33 to 54 years old. The median age was 43.23 ± 2.76 years old. It can be seen that the difference between the two groups of patients in the above data is not obvious, $P > 0.05$.

1.2 Methods

First of all, all patients should be given laparoscopic hysteromyoma removal. The nursing staff should guide the patient to take the lithotomy position, keep the head low and high enough, and give the patient general anesthesia through tracheal intubation. On this basis, the control group was treated with oxytocin for combination therapy, and 10 ml of 5% glucose injection was added to 20 IU oxytocin. The observation group was treated with carboprost tromethamine, and 10 ml of 5% glucose injection was added to 1 ml of carboprosttromethamine. At the same time, 3 months before the operation, the patient's menstrual day 1 begins, the patient is given daily mifepristone tablets for oral treatment, once a day, each time 10 mg, and the medication lasts for 3 months, within 2 days of withdrawal The uterine fibroids were removed and the patient was given mifepristone tablets after the operation for 3 months. At the same time, all patients were given a needle 8 in the pseudoencapsulation around the fibroids. After the whitening around the fibroids, the fibroids could be bluntly stripped, and the fibroids were removed by a rotary cutter. The muscle layer of the sarcoplasmic layer was used to stop bleeding with an absorbable line.

1.3 Observation indicators

The main observations of this study were the therapeutic effects, adverse reactions, surgical conditions, progesterone receptors, and estrogen receptor levels in uterine fibroids before and after surgery.

1.4 Statistical analysis

The SPSS17.0 software is the tool used to test the data involved. The tool used to measure the relevant data is (x±s), and the *t*-test is performed. The application (%) indicates the count, and the Chi-square test was performed. $P < 0.05$ has Statistical differences.

2 Results

2.1 Comparison of treatment effects

The clinical treatment effect of the observation group was much higher than that of the control group, and the difference was statistically significant, $P < 0.05$ [Table 1].

2.2 Comparison of adverse reactions

The incidence of adverse reactions in the observation group in rash, fatigue, nausea, and vomiting was much lower than that of the control group [Table 2].

2.3 Comparison of surgical conditions

It can be clearly seen that the intraoperative blood loss, operation time, and hospitalization time of the observation group are better than the control group, and there are obvious differences [Table 3].

2.4 Comparison of progesterone receptor and estrogen receptor levels in uterine fibroids before and after surgery

The progesterone receptor and estrogen receptor levels in the uterine fibroids before and after surgery were

Table 1. Comparison of treatment effects between the two groups

Group	Significant effect (%)	Effective (%)	Invalid (%)	Total efficiency (%)
Observation group (*n*=33)	21 (36.34)	10 (30.3)	2 (6.06)	31 (93.94)
Control group (*n*=33)	12 (36.36)	8 (24.24)	13 (39.39)	20 (60.61)
χ^2				10.4392
P				0.0123

Table 2. Comparison of adverse reactions

Group	Rash	Weak	Feel sick and vomit	Total incidence
Observation group (*n*=33)	1	1	1	3
Control group (*n*=33)	4	4	5	13
χ^2				8.2500
P				0.0040

Table 3. Comparison of surgery

Group	Intraoperative blood loss	Operation time	Hospital stay
Observation group (*n*=33)	192.35±36.84	109.55±8.71	6.3255±0.76
Control group (*n*=33)	224.91±47.87	123.35±11.25	7.24±0.82
T	3.0965	5.5719	4.7270
P	<0.05	<0.05	<0.05

better than those in the control group, and the level after treatment was more significant [Table 3].

3 Discussion

In general, uterine fibroids occur mostly in women between the ages of 30 and 50. Clinical treatment of uterine fibroids is mainly performed by laparoscopic myomectomy. This type of surgery has remarkable clinical treatment effect, and the scope of application is relatively wide[4]. However, since this type of surgery will be affected by factors such as the clinical experience of the operator and the proficiency of the surgery, the risk of surgery is high. To further reduce the risk of surgery, it is necessary to use other drugs for adjuvant therapy. Among them, oxytocin is a commonly used hemostatic drug. It has the functions of lactation, contraction of the uterus, etc., and has a regulating effect on the cardiovascular system and central nervous system of the human body[5]. However, if the frequency of the use of oxytocin is too high, it will easily cause symptoms such as desensitization and uterine contraction. If the dosage of oxytocin is too high, it can easily cause the patient to suffer from insufficient blood volume and blood pressure, which greatly affects the situation to the clinical treatment effect. Carboprosttromethamine belongs to a novel drug, a natural prostaglandin F2a drug, which can promote smooth muscle contraction[6]. Mifepristone is a steroidal drug that effectively mediates human function by inhibiting the secretion of estrogen and progesterone. Combined with progesterone receptors, it can effectively reduce progesterone levels, thereby reducing the volume of uterine fibroids[7]. Through the application of carboprost tromethamine combined with mifepristone in the treatment of uterine fibroids, it can effectively inhibit the growth of estrogen and progesterone, further reduce the proliferation of uterine fibroid tumor cells, and reduce the tumor volume[8].

In this study, the clinical treatment effect of the observation group was 93.94%, and the clinical treatment effect of the control group was 60.61%. The clinical treatment effect of the observation group was significantly higher than that of the control group. One case of rash, one case of fatigue and one case of malignant vomiting occurred in the observation group, and the incidence of adverse reactions was 9.09%.In the control group, 4 cases of rash, 4 cases of fatigue, 5 cases of malignant vomiting occurred, and the incidence of adverse reactions was 39.39%. The incidence of adverse reactions in the observation group was much lower than that in the control group. The incidence is much lower than the control group. The data of the intraoperative blood loss, operation time, and hospitalization time of the observation group (192.35 ± 36.84, 109.55 ± 8.71, and 6.32 ± 0.76, respectively) were also better than the control group (224.91 ± 47.87, 123.35 ± 11.25, and 7.24 ± 0.82, respectively). In the final observation group, the progesterone receptor and estrogen receptor levels in uterine fibroids before and after surgery were 3.71 ± 0.78, 2.67 ± 0.57, 3.23 ± 0.73, and 2.81 ± 0.43, respectively. The body and estrogen receptor levels were 3.72 ± 0.81, 3.31 ± 0.66, 3.24 ± 0.71, and 3.14 ± 0.67, respectively. The data of the observation group were better than the control group, and the difference was significant.

4 Conclusion

The efficacy of carboprost tromethamine combined with mifepristone in the treatment of uterine fibroids is significant and deserves further clinical development.

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