

## Clinical Efficacy and Safety of Laparoscopic Postoperative Leuprolide in Treatment of Endometriotic cysts

Yu Bin<sup>1</sup> Juan Juan<sup>2</sup> Su Nita<sup>2</sup>

1 Gynecology Department of Affiliated Hospital of Inner Mongolia University for Nationalities Tongliao, Inner Mongolia 028007

2 School of Clinical Medicine of Inner Mongolia University for Nationalities Tongliao, Inner Mongolia 028007

**Abstract:** Purpose To investigate the clinical effect of the use of leuprolide after laparoscopic surgery in patients with endometriosis. Method: Select 220 patients with endometriosis treated in our hospital from January 2015 to June 2016, and randomly divided them into simple group and treatment group, with 110 cases in each group. The simple group did not receive any treatment after laparoscopic surgery. The treatment group received leuprolide after surgery. Compare the treatment effect and safety of the two groups of patients. *Results* The treatment efficiency of the treatment group was significantly better than that of the simple group,  $P < 0.05$ ; and the relapse rate of the treatment group was low,  $P < 0.05$ . *Conclusion* The use effect of leuprolide in the treatment of endometriosis patients after laparoscopic surgery is better, with low relapse rate and high safety, and is worthy of clinical promotion.

**Key words:** Laparoscopy; Leuprolide; Endometriosis

### 0 Introduction

Endometriosis is one of the common types of diseases in clinical gynecology, and it often occurs in women of childbearing age. The incidence of this disease in normal-birth women is 10-15%, but the incidence in women suffering from infertility is as high as 30%<sup>[1]</sup>. The incidence of the disease has gradually increased in recent years. In addition, some patients still have relapse after treatment, which seriously plagues their daily lives. At present, the treatment of the disease is

mainly based on drug therapy and surgical treatment. However, radical surgery may lead to permanent loss of fertility<sup>[2]</sup>. Therefore, extensive support has not been received from patients, but conservative treatment is with high relapse rate. Some studies have indicated that laparoscopic surgery combined with drug therapy can improve the therapeutic effect of the disease. Therefore, this article will collect some of the patients who have recently undergone treatment in our hospital to carry out research, and now report the research results as follows.

### 1 Case information and treatment plan

#### 1.1 Case Information

All the subjects in this study were selected from 220 patients with endometriosis who were treated in our hospital from January 2015 to June 2016 and were randomly divided into the simple group and the treatment group. The ages of patients in the simple group were 23-37 years old, the average age was  $(28.4 \pm 4.5)$  years, and there were 98 cases of dysmenorrhea; as for clinical stages, there were 6 cases in stage I, 17 cases in stage II, and 18 cases in stage III. The patients in the treatment group were 22-36 years old, with an average age of  $(28.7 \pm 4.1)$  years. As for clinical stages, there were 5 in stage I, 20 in stage II, 18 in stage III, and 12 in stage IV; There were 101 cases of dysmenorrhea; There was no significant difference in age, clinical stage, and number of dysmenorrhea between the two groups,  $P > 0.05$ , which can be used as a late comparison of the study.

## 1.2 Treatment plan

The simple group received only laparoscopic surgery. The specific procedures were as that all 110 patients underwent laparoscopic surgery under general anesthesia: The separation of pelvic adhesions was performed on the patient, and the pelvic anatomy was restored as far as possible. In case of pigmented lesions, electrocoagulation was used to eliminate ectopic lesions as far as possible. Then the ovarian endometriotic cyst stripping was performed, the cyst fluid in the patient's cyst was aspirated cleanly, and then the cyst wall was peeled off to the ovarian cortex, and the surface was peeled off for electrocoagulation to stop bleeding and the removed specimen was examined. The abdominal cavity was cleaned with normal saline after surgery and the wound was treated. In addition to the implementation of the above, the treatment group also required medication, specifically: In the first 3 days after surgery, leuprolide acetate was used for the first time, 3.75 mg was injected subcutaneously, and once every 28 days thereafter, continuous treatment for 3 months<sup>[4]</sup>.

## 1.3 Observation of Indicators

After the treatment, they were followed for a period of 12 months to observe the improvement of the clinical symptoms of the two groups. The symptoms of dyspareunia and dysmenorrhea were evaluated by digital grading method. The pain score was 1-10. Symptoms with a degree of improvement of more than 66% are considered to be of significant effect. Improvements of 33%-66% are generally effective. Improvements of less than 33% have no

effect. Calculate the relapse rate of the two groups of patients, relapse means: the clinical symptoms of the postoperative patient can be improved, but the typical clinical symptoms relapse at the time of return visit, and the cystic tumor or mixed tumor can be seen when performing the B-ultrasound examination. Observation and comparison of adverse reactions in two groups of patients.

## 1.4 Statistical analysis

In this study, SPSS 18.0 statistical software was used to analyze the data. The mean  $\pm$  standard deviation ( $\pm s$ ) represents the measurement material, and the t-value test was performed<sup>[6]</sup>. Percentage (%) was used to represent the count material in the group, and The Chi-square (X<sup>2</sup>) test was performed and the final inter-group results were tested with a statistical significance of  $P < 0.05$ .

## 2 Results

### 2.1 Comparison of treatment effects between two groups of patients

The treatment efficiency of the treatment group was 96.36%, which was significantly higher than that of the simple group (82.73%,  $P < 0.05$ ). In the treatment group, 7 patients relapsed (3 in stage III and 4 in stage IV), and the relapse rate was 6.36%, which was significantly lower than that in the simple group (20.91%; 23 cases; 4 cases in stage II, 9 cases in stage III, 10 cases in stage IV).  $P < 0.05$ , only 7 patients in the treatment group had cyst relapse; The difference between the two groups was huge and statistically significant. See Table 1:

Table 1 Treatment effect of two groups of patients [n(%)]

Group	Significant effect	Generally effective	No effect	Effective rate	Relapse rate
Simple Group	59 (53.64)	32 (29.09)	19 (17.27)	82.73%	23 (20.91)
Treatment Group	76 (69.09)	30 (27.27)	4 (3.64)	96.36%	7 (6.36)
X <sup>2</sup>	-	-	-	10.9247	10.3653
P	-	-	-	0.0009	0.001

### 2.2 Comparison of adverse reactions after treatment in two groups of patients

After treatment, 7 patients (6.36%) experienced adverse reactions, including 3 cases of hot flashes and 4 cases of hyperhidrosis. In the simple group, there were 8 cases (7.27%) of adverse reactions, including 5 cases of hot flashes and 3 cases of hyperhidrosis. The

incidence of adverse reactions in both groups did not show significant statistical significance,  $P > 0.05$ .

## 3 Discussion

Endometriosis cyst is one of the common types of diseases in clinical gynecology. The disease can lead to dysmenorrhea and abnormal vaginal bleeding in

patients. Severe persons may bear the risk of infertility. Laparoscopic cystectomy is commonly used to treat this disease in clinical practice and has good curative effect. The relapse rate of the disease is high. In recent years, research reports have shown that<sup>[4-5]</sup> combining leuprolide with laparoscopic surgery for the treatment of endometriotic cysts has high clinical value and can reduce the relapse of the disease. After the first dose of leuprolide, the pituitary-gonadal system can be excited and the gonadotropin can be released from the pituitary gland. It can also relieve the pain of the patient. However, if the drug is used for a long time, it can inhibit the gonadotropin and make the lesions in the endometrium atrophy and come off to achieve the effect of eliminating the lesion. The use of this drug can effectively inhibit the relapse of cysts. In this group of studies, the use of combination therapy showed that the relapse of cysts in patients was significantly lower than that of simple treatment,  $P < 0.05$ . The results confirm the accuracy of the above statement.

In addition, the study results of this group showed that the treatment effective rate of the laparoscopic treatment group combined with leuprolide treatment was 96.36%, significantly higher than the 82.73% of the patients in the simple group, the difference between the groups is large, indicating that the use effect of leuprolide after surgery is better. In addition, there were fewer adverse reactions in the two groups, indicating that the safety of the treatment group was

higher,  $P < 0.05$ . In summary, the use of leuprolide in the treatment of endometriosis patients after laparoscopic surgery is better, the patient's recurrence rate is low, the patient's adverse reactions after treatment is less, with higher safety, which can improve the quality of life of patients and is worthy of clinical promotion.

## References

- [1] Wang Xia, Qin Mingli, Liu Fang, et al. Clinical Study of Leuprolide Injection Combined With Jiarong Tablet In The Treatment of Endometriosis With Infertility[J]. *The Chinese Journal of Clinical Pharmacology*, 2017, 33(12):1120-1122+1126.
- [2] Wu Wenjun, Chen Guangsheng. Clinical Efficacy and Safety of Xuefu Zhuyu Decoction Combined With Leuprolide In The Treatment Of Infertility Endometriosis Infertility [J]. *Chinese Archives of Traditional Chinese Medicine*, 2017, 35(04):927-930.
- [3] Qin Zhengwen. Laparoscopic Combined With Leuprolide Treatment Of Endometriosis With Infertility Value Analysis and Influence On Patients' Fertility[J]. *Maternal and Child Health Care of China*, 2017, 32(01):113- 115.
- [4] Zhang Yufang, Lin Yao, Lu Xiuying, et al. Clinical Observation of Leuprolide Acetate Treatment of Endometriosis[J]. *China Pharmacy*, 2016, 27 (26):3675-3677.
- [5] Liu Wei, Zhang Lili, Liu Hong. Clinical Study of Leuprolide Acetate Combined With Li Fumin In The Treatment of Endometriosis[J]. *China Modern Medicine*, 2013, 20(16):103-105.
- [6] Yi Huilan, He Meifang. Clinical Observation of Laparoscopic Combined With Leuprolide Acetate Treatment of Endometriosis[J]. *China Practical Medicine*, 2011, 6(06):145-146.