

The Clinical Effect of Moxifen Tablets Combined with Medroxyprogesterone Acetate Injection on Patients with Endometriosis

Xiaopeng Zhang
Lin Cong

Xiaopeng Zhang, Lin Cong* Department of Gynaecology and Obstetrics, The First Hospital of Anhui Medical University, Hefei 230001, Anhui Province, China, *Corresponding Author: Lin Cong, No. 218 Jixi Road, Hefei City, Anhui Province, China, Email: 395458892@qq.com, Acknowledgement: This work was supported by Anhui Natural Science Foundation (Grant No. 1808085QH248)

Objective: To explore the clinical effect of moxifen tablets combined with medroxyprogesterone acetate injection on patients with endometriosis. **Methods:** 90 patients with endometriosis from August 2018 to March 2019 were randomly divided into control group and observation group, with 45 cases in each group. The control group was treated with moxifene tablets and the observation group with medroxyprogesterone acetate. The changes of serum sex hormone, P, CA125 levels, adverse reactions and therapeutic effects were compared between the two groups. **Result:** Before treatment, there was no significant difference in serum sex hormone and P, CA125 levels between the two groups ($P > 0.05$); after treatment, the indexes of the two groups were reduced, and the LH, E₂, FSH, CA125 and P water in the observation group were lower than those in the control group ($P < 0.05$); the curative effect of the observation group was significantly better than that in the control group ($P < 0.05$); the incidence of adverse reactions in the observation group was lower than that in the control group ($P < 0.05$). **Conclusion:** Moxifene combined with medroxyprogesterone acetate has a significant therapeutic effect on endometriosis. It can significantly reduce the level of serum sex hormone. The incidence of adverse reactions is low and the treatment safety is high. It is worth popularizing.

Key words: Endometriosis; Moxifen tablets; Medroxyprogesterone acetate
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Endometriosis, as a common and frequently occurring disease in clinical gynecology, is more common in women of childbearing age¹. Due to the influence of adverse factors, endometrium grows in other parts of the body. Although it is a benign disease, the cure rate is relatively low. Patients often have symptoms such as dysmenorrhea, chronic pelvic pain and coital pain, which seriously affect their quality of life². At present, for the patients with endometriosis, surgery, medicine and interventional therapy are often used. Medroxyprogesterone acetate is widely used in the treatment of endometriosis with its advantages. A large number of studies have confirmed that it can significantly reduce the hormone level of patients and delay the progress of the disease³. However, with long-term drug use, the drug resistance of patients increases

gradually, the disease recurrence rate increases, and the incidence of adverse reactions is high, which seriously affects the life safety of patients, so it is urgent to explore a more safe and effective treatment method⁴. Some scholars have proposed that the combination of moxifen tablets in the treatment of endometriosis can enhance the pharmacological effect of drugs and reduce adverse reactions. In order to confirm the accuracy of this statement, this study is to study the patients with endometriosis in groups. The observation group is treated with combination therapy, and its clinical effect is observed. The report is as follows.

Materials and methods

General information

90 patients with endometriosis from August 2018 to March 2019 were randomly divided into

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control group and observation group, with 45 cases in each group. In the control group, the average age was (37.42 ± 10.12) years (25-56); the course of disease was 3 months to 3 years (2.45 ± 1.61); the degree of dysmenorrhea was 11 mild, 19 moderate and 15 severe; 41 married and 4 unmarried; the menstrual cycle was 26-30 days (28.23 ± 2.31) days; the menstrual cycle was 3-7 days (5.13 ± 1.22) days. In the observation group, the age ranged from 27 to 58 years, with an average of (39.66 ± 10.48) years; the course of disease ranged from 2 months to 2.5 years, with an average of (2.13 ± 1.37) years; 40 cases were married, 5 cases were unmarried; the degree of dysmenorrhea: 16 cases were severe, 17 cases were moderate, 12 cases were mild; the period of menstruation ranged from 4 to 7 days, with an average of (6.10 ± 1.13) days; the period of menstruation ranged from 27 to 30 days, with an average of (29.41 ± 2.53) days. There was no significant difference between the two groups ($P > 0.05$).

Inclusion and exclusion criteria

Inclusion criteria: ① The patient was diagnosed as endometriosis by examination, and the age was less than 60 years old; ② The patient and his family members knew the basic information and signed the informed agreement. Exclusion criteria: ① Refuse to participate in the study without signing the informed consent; ② Suffer from vaginal infectious diseases; ③ Have a history of contraindications or allergies to the use of drugs in the Institute; ④ Have other substantive organ dysfunction; ⑤ Combine infectious, hematological and other malignant tumor diseases; ⑥ Mental and intellectual disorders, poor coordination and compliance; ⑦ Complicate other serious immunity Metabolic diseases.

Method

The control group was treated with medroxyprogesterone acetate. Medroxyprogesterone acetate injection (produced by puqiang company, approval No.: h20120545) was injected intramuscularly within 5 days of menstrual cycle, once a month, for 6 times continuously.

The observation group was treated with moxifen tablet, the usage and dosage of medroxyprogesterone

acetate were the same as that of the control group, and moxifen tablet (produced by Shandong Health Pharmaceutical Co., Ltd., gjzz: h37022925) was administered orally for 10 mg twice a day on the 5th day after menstruation, 20 days as a course of treatment, and 6 courses of treatment were taken continuously.

Observation indicators

① Using Roche 411 automatic electrochemiluminescence analyzer, the serum sex hormone levels, including estradiol (E2), follicle stimulating hormone (FSH) and luteinizing hormone (LH), were measured before and after treatment.

② Before and after the treatment, the elbow vein blood of patients was drawn, and the progesterone (P) and serum CA125 levels were detected after routine centrifugation.

③ After the treatment, the treatment effect of the two groups was evaluated, which was divided into significant effect: the test showed that the patient's hormone decreased significantly, the clinical symptoms such as pelvic mass and dysmenorrhea disappeared, and each index was normal; effective: the patient's hormone index decreased, the pelvic mass decreased, the symptoms such as dysmenorrhea and coital pain relieved, no serious adverse reactions, and still needed continuous treatment; ineffective: the patient's clinical symptoms There was no significant improvement in the disease, and the serious cases were even worse. Total effective rate = effective + effective.

④ Adverse reactions were recorded in the two groups, including nausea, hot flashes, abnormal liver function and vaginal discomfort.

Statistical methods

Using SPSS 21.0 statistical software, "mean \pm standard deviation" means measurement data, with t-test; counting data is made up of%, with χ^2 test, $P < 0.05$ is statistically significant.

RESULTS

Comparison of serum sex hormone levels

Before treatment, there was no significant

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difference in E2, LH and FSH levels between the two groups ($P > 0.05$); after treatment, the E2, LH and FSH levels of the two groups were reduced, and the observation group was lower than the control group ($P < 0.05$), as shown in Table 1.

P, CA125 level comparison

Before treatment, there was no significant difference in the levels of P and CA125 between the two groups ($P > 0.05$); after treatment, the levels of P and CA125 decreased, and the observation group was lower than the control group ($P < 0.05$), as shown in Table 2.

Treatment effect comparison

There was no significant difference between the observation group and the control group ($P > 0.05$), as shown in Table 3.

Comparison of adverse reactions

The incidence of nausea, abnormal liver function, hot flashes and vaginal discomfort in the observation group was significantly lower than that in the control group ($P < 0.05$), as shown in Table 4.

Table 1.
Comparison of serum sex hormone levels between the two groups before and after treatment ($\bar{x} \pm s$)

Group	Number of cases	E2 (pmol/L)		LH (U/L)		FSH (U/L)	
		Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
Control group	45	205.5±16	124.2±9	7.40±1.2	6.24±0.22	9.1±3.2	7.56±2.4
Observation group	45	206.1±15	116.3±8	7.51±1.1	5.13±0.35	8.9±2.9	6.21±2.2
t	-	0.111	4.401	0.486	18.011	0.317	6.721
P	-	0.911	0.000	0.627	0.000	0.756	0.000

Table 2.
Comparison of P and CA125 levels between the two groups ($\bar{x} \pm s$)

Group	Number of cases	P (nmol/L)		CA125 (U/mL)	
		Before treatment	After treatment	Before treatment	After treatment
Control group	45	7.41±1.82	4.45±1.51	35.41±3.81	21.33±2.35
Observation group	45	8.24±1.53	3.24±0.83	35.32±2.65	18.21±2.48
t	-	0.145	5.693	0.236	6.125
P	-	0.885	0.000	0.813	0.000

	cases	function	rt	e rate	
Control group	45	2 (4.44)	3 (6.67)	2 (4.44)	9 (20.00)
Observation group	45	0 (0.00)	1 (2.22)	1 (2.22)	3 (6.67)
X ²	-	-	-	-	7.687
P	-	-	-	-	0.005

Table 3.
Comparison of therapeutic effect between the two groups [n (%)]

Group	Number of cases	Markedly effective	Effective	Invalid	Total effective rate
Control group	45	25 (55.56)	13 (28.89)	7 (15.56)	38 (84.44)
Observation group	45	29 (64.44)	14 (31.11)	2 (4.44)	43 (95.56)
X ²	-	-	-	-	6.869
P	-	-	-	-	0.008

Table 4.
Comparison of adverse reactions between the two groups [n (%)]

Group	Number of cases	Abnormal liver	Nausea	Vaginal discomfort	Hot flashes	Total incidence
Control group	45	2 (4.44)	3 (6.67)	2 (4.44)	2 (4.44)	9 (20.00)
Observation group	45	0 (0.00)	1 (2.22)	1 (2.22)	1 (2.22)	3 (6.67)
X ²	-	-	-	-	-	7.687
P	-	-	-	-	-	0.005

DISCUSSION

Although endometriosis is a benign disease, if it is not treated effectively in time, it may change to malignant⁵. Ovary and fallopian tube are the main sites of endometriosis, followed by myometrium, pelvis, bladder, peritoneum and other parts⁶. Most of them occur in the female menstrual period. When the menstrual blood enters the abdominal cavity, it will stimulate the cells on the surface of the ovary, cause ectopia, further cause adhesion or hardness of the pelvic cavity and fallopian tube, and even cause obstruction in serious cases. If there is abnormal hormone metabolism and immune function, it is likely to cause retrograde obstruction of the pregnant egg and infertility⁷. At the same time, the ectopic endometrium causes the fallopian tube obstruction, which is easy to cause the fertilized egg to grow locally and increase the probability of ectopic pregnancy⁸. Therefore, early and effective

treatment of endometriosis is of great significance.

In this study, a total of 90 patients with endometriosis were selected for analysis. They were treated with medroxyprogesterone acetate and moxifene tablets respectively. The results showed that the therapeutic effect of the observation group was better than that of the control group, and the level of serum sex hormone was lower ($P < 0.05$). The analysis of the causes showed that the endometrium was highly dependent on sex hormone, and serum sex hormone was the main factor to promote endometriosis Reason⁹. In addition, because of the function of ovary and hormone metabolism, which are regulated and controlled by nerve center, the activity of nerve center has certain influence on the pathogenesis of abnormal uterus. Therefore, the treatment of endometriosis is mainly to reduce the body's sex hormones¹⁰. As a strong anti-progesterone, medroxyprogesterone acetate can effectively combine with progesterone receptor and glucocorticoid receptor. The affinity of medroxyprogesterone acetate with endometrial progesterone receptor is very high, and it can be used as an anti-early pregnancy drug^{11,12}. After the drug enters the human body, it can be directly combined with the glucocorticoids in the hypothalamus and ovary to reduce the content of estrogen and progesterone in the body, so as to make endometrial cells fail, relieve dysmenorrhea symptoms and reduce menstrual volume¹³.

Moxifen tablet is a kind of non-steroid estrogen complex, which can combine with ectopic cytoplasmic estrogen and estradiol receptor, inhibit the secretion of estrogen, slow down the movement of endometrial glands, block the blood supply of ectopic endometrium, thus affecting its growth and development¹⁴. Ectopic endometrium has no blood nutrition supply, and will soon fail or die. It was found that after the treatment with medroxyprogesterone acetate, the levels of P, E2 and FSH in the two groups were reduced, which proved that the drug can reduce the levels of estrogen and progesterone, and then inhibit ovulation, amenorrhea, and promote endometrial tissue atrophy¹⁵. In addition, the CA125 level in the observation group was significantly reduced after treatment. CA125, as the most reliable diagnostic

marker of endometriosis, caused the increase of CA125 hormone level when endometrial lesions occurred. Medroxyprogesterone acetate can enhance the activity of progesterone, increase the sensitivity of uterus to prostaglandin, inhibit the secretion of CA125, reduce the secretion of ovarian androgen, block the acquisition of androgen by peripheral organs, so as to improve the symptoms of high serum, rapidly reduce the sensitivity of tissue to pancreatic islet hormone, improve the symptoms of insulin resistance and follicular growth retardation. In combination with moxifene tablets, the progesterone and glucocorticoid antagonists can be further strengthened. The gonadal axis of hypothalamus can be inhibited by noncompetitive anti pricking hormone, which can be combined with progesterone receptor, reduce arterial blood flow, increase blood flow resistance, and lead to ectopic endometrial atrophy¹⁶. In the follow-up study, the safety of medroxyprogesterone acetate combined with moxifen tablets was analyzed. The results showed that the incidence of nausea, liver injury, hot flashes and other adverse reactions in the observation group was significantly lower ($P < 0.05$). The combination of medroxyprogesterone acetate can reduce the side effects of medroxyprogesterone acetate on patients, reduce the side effects of single drug on patients' nerves, gastrointestinal tract and other side effects, and improve the body. The drug tolerance and safety are high, which can further improve the therapeutic effect. In addition, during menstruation, you should keep your own emotional stability, avoid endocrine disorders caused by emotional fluctuations, prohibit more intense sports and heavy physical labor, and eliminate sexual life during menstruation¹⁷. During menstrual period, unnecessary gynecological examination should be avoided to avoid compression of endometrium, resulting in endometrial fragments entering the abdominal cavity.

CONCLUSION

In conclusion, medroxyprogesterone acetate combined with moxifene tablet is effective in treating endometriosis, which can effectively improve the level of serum sex hormone, and has high safety and no serious adverse reactions, so it is

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