Pisco Med Publishing

General Surgery (2017) Volume 1, No 1 doi: 10.18282/gs.v1i1.69

Original Research Article

Comparison of the efficacy of mifepristone and Marvelon treatment for perimenopausal dysfunctional uterine bleeding

Xiaopin Yang

Zhengzhou City People 's Hospital of Zhengzhou City, 450000

***Abstract*: Objective:** To investigate the efficacy of mifepristone and Marvelon treatment for perimenopausal dysfunctional uterine bleeding. **Method:** 60 patients were randomly selected from January 2016 to June 2016 in our hospital for treatment of menopausal gouthenopsis. After different treatment regimens were communicated with the patients, the patients were treated with different methods. In the experimental group (28 cases), mifepristone was used to treat dysfunctional uterine bleeding. The control group (32 cases) was treated with Marvelon treatment and the results were compared between the two groups. **Results:** The initial conditions of the two groups were not significantly different ($P > 0.05$), seen from the levels of folliclein, luteinizing hormone, estrogen and progesterone. After treatment however, the effective rate of the treatment group was significantly higher than the control group ($P < 0.05$). **Conclusion**: Mifepristone is effective in the treatment of perimenopausal dysfunction.

***Keywords*:** mifepristone; Marvelon; perimenopausal dysfunction

Received: 1st Aug. 2017 **Accepted:** 14th Oct. 2017 **Online:** 19th Oct. 2017

Introduction

Perimenopausal functional bleeding mainly manifested as irregular menstruation, which may not occur for long or be frequent. Because of menstrual bleeding, patients often suffer from moderate to severe anemia. In the clinical records, anovulatory dysfunctional uterine bleeding is the most common, accounting for about 90% of dysfunctional uterine bleeding and often occurs in adolescence and perimenopausal period[1]. Its clinical treatment relies heavily on the injection of in vitro progesterone, to antagonize the role of estrogen on the endometrium so that the endometrium shifts from the proliferative phase to the secretory phase and then the bleeding stops. The purpose of this study is to explore the efficacy of mifepristone and Marvelon treatment of perimenopausal dysfunctional uterine bleeding.

1. Materials and method

1.1 General information

60 patients were randomly selected from January to December 2016 in our hospital due to menopausal dysfunction. 32 patients consisted the control group and 28 consisted the treatment group. Exclusion criteria: patients with severe mental illness, coagulopathy, malignant tumors or genital metastasis. The 60 female patients aged from 49 to 53 years, with a mean age of 51.6 ± 0.6. The general conditions of the patients had little impact on the content of this study.

1.2 Methods

The treatment group received mifepristone treatment. Mifepristone (Hubei Gedian Fufu Pharmaceutical Co., Ltd. production, the Chinese medicine Zhunzi: H2003351) was taken when patients were in fasting or 2 hours after eating, at the dose of 25-50 mg, twice a day. For the control group, Marvelon (produced by N.V. Organon, approval number: H201130491) was taken at 2 tablets/day at first and 1 tablet/day after hemostasis. For both groups, a course of treatment consisted of 3 weeks. Effects of mifepristone and Marvelon were evaluated after 3 courses.

1.3 Observation indicators

The treatment effect is categorized as cured, markedly effective, effective and no effect. Cured: After 3 courses of treatment, patients did not show symptoms of bleeding after menstruation or menopause. Markedly effective: bleeding is largely alleviated after menstruation, even in the withdrawal period. Effective: bleeding still occurs during treatment, but is under control; symptoms are improved than before. No effect: symptoms before and after the treatment do not differ significantly. Treatment efficiency = (cured + markedly effective + effective) / total number of patients.

1.4 Statistical analysis

Data of the treatment efficiency, hormone levels and other main sentences were analyzed using *t* test and chi-square test (SPSS v21.0). When $P < 0.05$, the difference was considered statistically significant.

2. Results

2.1 Therapeutic effect

The treatment efficiency of the treatment group (96%) was significantly higher than that of the control group (78%, $P < 0.01$), see **Table 1**.

Table 1. Comparison of therapeutic effect between treatment and the control group

Group	Cure	Markedly effective	Effective	No effect	Efficacy
Treatment group（28 cases）	9（32%）	11（39%）	7（25%）	1（3.6%）	27（96%）
Control group（32 cases）	6（19%）	9（28%）	10（31%）	7（22%）	25（78%）
X^2					10.364
P					＜0.01

2.2 Comparison of hormone levels between the two groups

Before treatment, patients of the two groups had comparable levels of thorn follicle hormone, luteinizing hormone, estrogen, progesterone and other aspects ($P > 0.5$). After treatment however, those levels of each group became significantly different ($P < 0.01$), see **Table 2**.

Table 2. Comparison of hormone levels before and after treatment in both groups

Group	Thrombosis follicle	Progesterone luteinizing hormone		Progesterone		Estrogen
	Before	AfterBefore	After	Before	After	BeforeAfter
Experimental group	11.5±1.5	4.9±1.28.4±0.9	4.2±0.6	362.5±10.9	163.5±18.6	12.6±2.06.0±0.8
Control group	11.3±1.6	8.9±1.58.8±0.7	72±1.0	362.6±11.2	210.3±18.6	12.9±1.89.4±1.6
t	0.724	9.2410.821	10.239	0.821	10.241	0.92010.263
P	0.516	＜0.010.638	＜0.01	0.716	＜0.01	0.628＜0.01

3. Discussion

Dysfunctional uterine bleeding is due to HPO axis imbalance caused by menstrual disorders, and the diagnosis of dysfunctional uterine bleeding need to rule out the organic disease. A normal menstrual cycle is co-regulated by estrogen, progesterone, thrombolytic hormone, luteinizing hormone and other hormones. Dysfunction of blood is due to the patient's mental factors such as stress or imbalance in the regulation of HPO axis, resulting in a variety of sexual disorders in the body and dysfunctional uterine bleeding[2]. According to the age of occurrence, dysfunctional uterine bleeding can be divided into adolescent and perimenopausal. The latter is anovulatory and mainly occurs at around 40-year-old before and after menopause, with clinical characterizations of frequent, irregular menstrual cycle, menstrual volume and more. Anovulatory dysfunctional uterine bleeding develops in patients without ovulation, and corpus luteum did not generate long-term effects.

In addition, endometrial estrogen promotes endometrial hyperplasia and glandular epithelial dysplasia, so the menstrual period of patients without ovulation is relatively long. Estrogen also promotes mucopolysaccharide polymerization, which decreases the interstitial vascular permeability and thus affects the content exchange of blood vessels, resulting in local endometrial ischemia and necrosis. Mucopolysaccharides also prevent the endometrial shedding, so the endometrium falls out of synchronization, causing long-term irregular endometrium bleeding. That is why anovulatory endometrial hemorrhage is always accompanied with more menstrual flow.

Marvelon treatment is currently using a wide range of contraceptives. Patients with dysfunctional uterine bleeding can use it to antagonize the role of estrogen by promoting the endometrium from the original hyperplasia state to the secretory phase to restore a normal menstrual period[3]. Mifepristone is a strong progesterone that competitively bind to the endometrial progesterone and glucocorticoid receptors with a relatively high affinity. That is how it can be used as an anti-estrogen antagonist. It also inhibits the HPO axis and the development of follicles, so it is commonly reported to push patients into menopause[4].

In this study, mifepristone and Marvelon were both found to significantly decrease the levels of folliclein, luteinizing hormone, estrogen and progesterone, and therefore cure or relieve the dysfunctional uterine bleeding. What's more, mifepristone out-performed Marvelon for introducing a better efficacy. In summary, for patients with perimenopausal dysfunctional uterine bleeding, mifepristone is an alternative medicine in addition to Marvelon, with a decent efficacy.

Reference

1. Liang Huihong, Zhang Qixin, Liu Tingting, *et al*. Mifepristone Intermittent Therapy and Continuous Medication in the Treatment of Perimenopausal Dysfunctional Uterine Bleeding Comparison. Heilongjiang Medical, 2013, 37 (10): 960-961.
2. Li Huashu, Wang Qingjin, Pan Xuhua, *et al*. Comparison of the Efficacy of Mirex and Mifepristone in the Treatment of Perimenopausal Dysfunctional Uterine Bleeding. Chinese General Practice, 2013,11 (8): 1211-1212,1270.
3. Weisberg E, Hickey M, Palmer D, *et al*. A Pilot Study to Assess the Effect of Three Short-Term Treatment on Frequent and /or Prolong Edbleeding Compared To Placebo in Women Using Implanon [J] .Human Reproduction, 2006,21 (1): 295-302.
4. Huang Yanhong, Wang Jianmin, *et al*. Hysteroscopy Endometrial Resection Combined with Mifepristone in Perimenopausal Dysfunctional Uterine Bleeding in the Recent Efficacy of Chinese Medicine Innovation, 2011, 8 (2): 59-61.