

COMPARING AND INVESTIGATING THE THERAPEUTIC EFFECT OF VAGINAL WASHING WITH BETADINE AND MATRICA® SOLUTION ON *CANDIDA VAGINITIS*

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ABSTRACT

Extracts of some plants have anti-fungal properties due to their specific compounds. German chamomile (*Matricaria chamomilla*) of Asteraceae species has antioxidant, anti-inflammatory and antimicrobial properties. This study aimed to examine the efficacy and compare the vaginal washing with chamomile hydroalcoholic solution with Matrica brand and betadine in patients with candida vaginitis. A total of 70 patients with a mean age of 28 years, with recurrent and relatively severe vaginitis were divided into two groups of 35 patients. For the first group, vaginal washing was done with betadine solution for two weeks, and each time, twice a week. For the second group, vaginal washing was conducted with Matrica solution for two weeks and each time, twice a week. Each time, the results of the study was reviewed at the end of the first and the second weeks, and the patients were examined. Comparison of candida vaginitis and improvement of the patient's clinical symptoms such as burning and itching of the vulva in the two groups showed that the greatest reduction of itching was resulted by vaginal washing with Matrica solution.

KEYWORDS: Chamomile, Matrica, Betadine, Bacterial and *Candida vaginitis*.

INTRODUCTION

Chamomile is of the medicinal plants belonging to Compositae species. Two German and Roman species of this plant are well-known. Due to the presence of some specific compounds in the German specie, more scientific studies are done on it, and it is more cultivated than the Roman one. It has different anti-inflammatory, antimicrobial, sedative, and antispasmodic properties. Alcoholic extract of German chamomile has antifungal and bactericidal properties (Abdoul-Latif et al, 2011). Chamomile extract is composed of 120 kinds of chemical compositions including chamazulenes, flavonoids and coumarins; and its major active components are chamazulene, apigenin and bisabolol (Gardiner et al, 2007). Alpha bisabolol as the most important chemical compound in the extract of this plant has antimicrobial effects. According to the scientific research conducted, the compounds in chamomile extract have anti-inflammatory, antibacterial and antioxidant effects (Aggag et al, 1972; Tubaro et al, 1984; Mann et al, 1986).

Vulvovaginal candidiasis is one of the most common female genital tract diseases. Nearly 75% of all women experience fungal vulvovaginal in a course of their life, and in approximately 40 to 50 percent of them, recurrence of the disease will be observed. Unfortunately, little attention has been paid to this disease by health organizations, funding and research centers (Sobel et al, 1998; Ferrer, 2000). The disease is caused by various types of *Candida*. *Candida albicans* has been the most common genus in the genital tract and makes candida vaginitis in 80 to 90 percent of cases. Several factors such as pregnancy, diabetes, using antibiotics, oral contraceptives and also corticosteroids by changing the normal vaginal flora, are predisposing reasons of candida vaginitis. Although there are several antifungal drugs in the treatment of candida vaginitis, there is little comparative information on the activity of these drugs in vitro, and organisms (Moreira et al, 2006; Ferahbas et al, 2006). Betadine is one of the most common therapies for the treatment of candida vaginitis. Betadine cause skin irritation and allergic reactions, and it cannot be used in the long term in those who are with non-toxic node colloid goiter as well as consumers of lithium.

It can be also infected by aerobic gram-negative bacteria. Betadine also in contact with living tissues inside the wound (like muscles, etc.) and by destroying them, causes a delay in wound healing and creates scar tissue and local sensitivities (Shahraz et al, 2005). Due to adverse effects and side effects of chemical drugs, using traditional medicine particularly the herbal therapy is considered today. Due to the side effects of betadine, vaginal washing with chamomile extract of Matrica brand and comparison of these two on the treatment of candida vaginitis is evaluated. The aim of this study was to compare the therapeutic, anti-inflammatory and antibacterial effects of Matrica and betadine solutions in candida vaginitis.

MATERIALS AND METHODS

A total of 70 patients with candida vaginitis who referred to private clinics (Gynecology) in the months of November to March (2014-2015) and in the age range of 18-38 years and a mean age of 28 years, with recurrent and relatively severe vaginitis were selected and the results of Pap tests and clinical examinations of them were collected and they were divided into two groups of 35 patients. For the first group, vaginal washing was done with betadine solution for two weeks, and each time, twice a week. For the second group, vaginal washing was conducted with 3 times diluted Matrica solution for two weeks and each time, twice a week. The results were evaluated each time. At the end of the first and second weeks, patients were examined.

RESULTS

Comparison of candida vaginitis and improvement of the patient's clinical symptoms such as burning and itching of the vulva in the two groups showed that the greatest reduction of itching was resulted by vaginal washing with Matrica solution. Using diluted Matrica solution in the vaginal washing in patients with candida vaginitis significantly reduced the growth and recurrence of candida, clinical and side effects such as burning, itching and inflammation of the vulva. Also, according to Figure 1, in the first and the second weeks, respectively, 57 and 80 percent of patients washed with Matrica solution, and 43 and 71 percent of patients washed with betadine were completely cured. So it can be used instead of betadine for vaginal washing and preventing unpleasant candida side effects and its recurrence. In addition, clinical observations show that the rate of adverse effects due to the use of betadine solution is more than diluted Matrica solution.

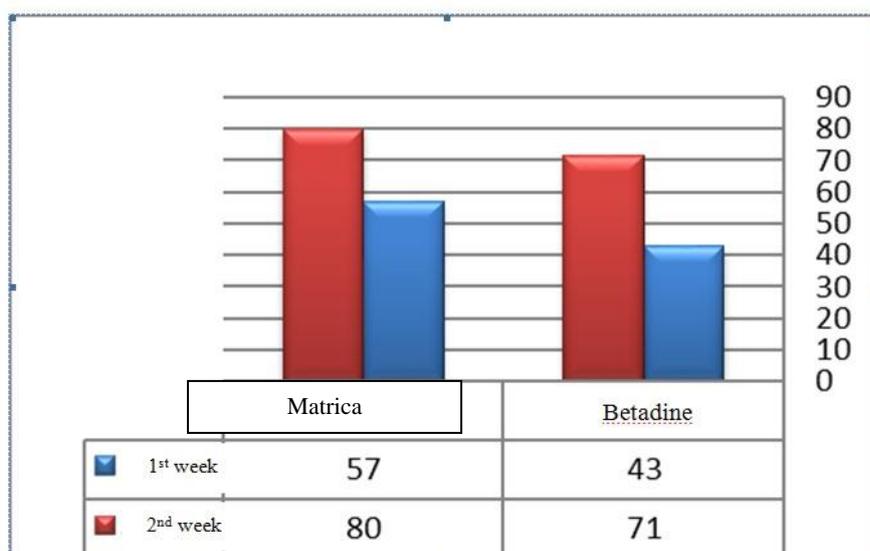


Fig.1. Improvement percentage of patients with *Candida vaginitis* after 2 weeks of vaginal washing with Betadine and Matrica solutions

DISCUSSION

Candida albicans is the second most common cause of vaginitis after bacterial infection. The prevalence of this infection has been reported in various populations. Vaginal application of betadine in the treatment of vaginitis has also been conducted in recent studies. In a study conducted in 2002, vaginal betadine has shown good and very good efficacy in the treatment of (fungal or bacterial, parasitic) vaginitis and also, in 70 to 90% of cases, they were cured (Petersen et al, 2002). In another study, treatment with 200 mg betadine vaginal tablets for 7 nights had been very effective in treating vaginitis, most of them with candida; and no specific side effects were observed in these studies (Yu et al, 1993). Due to the lack of side effects of Matrica compared to betadine in the treatment of the infection, the use of Matrica washing solution is more healthy and desirable. It is recommended to conduct more studies on the different forms of using chamomile extract such as creams or suppositories to facilitate the use in the treatment of patients with candida vaginitis.

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