

Vaginal Candidiasis Infection Treated Using Apple Cider Vinegar: A Case Report

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ABSTRACT

A 32-y-old married woman was admitted with intense vaginal discharge with foul odor, itching, groin pain, and infertility for the past 5 y. *Candida albicans* was isolated from the culture of vaginal swab. The patient was diagnosed with chronic vaginal candida infection. She failed to respond to integrative medicine methods

prescribed. Recovery was achieved with the application of apple cider vinegar. Alternative treatment methods can be employed in patients unresponsive to medical therapies. As being one of these methods, application of apple cider vinegar can cure vaginal candida infection. (*Altern Ther Health Med.* 2019;25(5):57-59.)

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Women aged between 15 and 49 years are at particular risk of developing reproductive health problems.¹ Among other reproductive health problems, vaginal infections constitute one of the leading causes of hospital admissions.²

Approximately half of the vaginal infections annually worldwide are reported from Asian countries.³ Turkey is one of the countries in which vaginal infections commonly occur among women, and at least 75% of women have a previous history of a vaginal infection.⁴⁻⁷

Candida albicans is the most commonly isolated organism from women with vaginal infections and is associated with recurrent vaginal infections.⁸ As being the most pathogenic member of its genus, it accounts for 50% to 70% of systemic fungal infections.⁹⁻¹¹ The candidemia-associated mortality rate ranges from 30% to 40%, depending on the severity of the underlying condition.¹²

Vaginal candida infection can be treated or prevented, or complications can be minimized with early diagnosis and

treatment. However, this infection may result in an important health problem that requires prolonged treatment, and complications may develop.¹³ Herein, we report a case of chronic vaginal candidiasis successfully treated with apple cider vinegar.

CASE REPORT

A 32-year-old woman who was married for 5 years presented with intense vaginal discharge with foul odor, itching, groin pain, and infertility for the past 5 years. The patient had a regular menstrual cycle. She did not use any contraceptive method and, despite regular sexual intercourse, she suffered from infertility and dyspareunia. *Candida albicans* was isolated from the culture of a vaginal swab. The patient was diagnosed with chronic vaginal candidiasis due to recurrent infections.

A detailed history revealed that the patient was examined by 6 physicians and used 7 antifungal regimens previously. She reported that she had to change pads and underwear frequently; as a result, her quality of life and social activities were deteriorated. She was also unable to have regular sexual intercourse due to dyspareunia and bleeding, which also complicated the relationship between the patient and her partner.

The patient also reported that she used an aqueous mixture of herbal remedies and had vaginal showers with this remedy for 3 months; furthermore, she cleaned her vagina with thyme oil. This application caused severe vaginal pain and scalding in the vaginal skin. Subsequently, she consumed a mixture of royal jelly, bee's pollen, and honey (1 spoon in the morning and 1 spoon at night). However, she did not

benefit from these methods, and she visited another physician and underwent screening for immune deficiency and cancer. All tests showed negative results, and she was prescribed fluconazole and vaginal douche with a mixture of boric acid. Although she had some relief for 20 days with this treatment, symptoms recurred. During this period, she attended 3 reiki sessions.

Although she was told that she was unable to become pregnant, she conceived 1 year later, despite persistent intense discharge and pain. After delivery, her treating physician recommended vaginal douche with a mixture of water and apple cider vinegar twice daily for 4 months. A dose of 20 mL of apple cider (5% acetic acid) was mixed with 1 L of water for application. She had received no medical therapy during this period and her complaints completely disappeared. At 24 months, the patient is still event free without any complaints.

DISCUSSION

Recurrent vaginal candida infections have a significant effect on the patients' comfort and sometimes may cause psychological sequel.¹⁴ It causes vaginal discharge and intense odor, negative effects on body image, avoiding sexual intercourse due to vaginal dryness and pain, fear of having cancer, weakness, psychological problems, and fear of infertility with loss of time and loss of work productivity. Furthermore, vaginal discharge caused by infection impairs quality of life, causes social isolation, decreases self-esteem, and adversely affects social activities.¹⁵⁻¹⁷ Similar to reports in the literature, the patient in the present case report suffered from physical and psychological problems. Her social activities were affected, her quality of life was impaired due to vaginal discharge and foul odor, and she had the fear of infertility.

It is considerably difficult for women to cope with vaginal candida infections. The women who do not respond to medical therapy and who suffer recurrent vaginal infections are known to resort to alternative and traditional treatment methods.¹⁸⁻²⁰ These alternative therapies include garlic, lactobacillus, vinegar, probiotics, tea tree oil, lemon juice, vaginal yogurt, boric acid, and applications of Chinese medicine.^{18,21-24} A study by Watson²⁵ did not support the use of apple cider in the treatment of vulvovaginal candida infection. It was stated that acetic acid could be used to prevent against candida infections, although acetic acid may have limited benefits due to resistance mechanisms of the organism²⁶ and that candida evolves with time.^{26,27} Conversely, 3 studies to date have reported that apple cider vinegar and its constituent acetic acid possesses antifungal properties, has effects on antifungal drug resistance, and constitutes an alternative therapy for *Candida albicans*, *Candida glabrata* infections, and *Candida stomatitis*.²⁸⁻³⁰ In a study by Moosa et al,³¹ acetic acid was suggested to be responsible for fungicide actions. However, the studies on this subject are limited, and randomized and controlled studies are scarce. Furthermore, systematic reviews strongly supporting certain pharmacological interventions in alternative treatment of

vaginal candida infections are devoid of literature data and there is less clear evidence on alternative therapies.¹⁸ The current report shows that vaginal douche with a mixture of apple cider vinegar applied twice daily cured vaginal candida infection and no recurrence occurred.

CONCLUSION

Applications of integrative medicine are popular among women suffering from vaginal candida infections and these remedies can be advised by some clinicians. However, further studies on this subject are encouraged to accumulate confirmatory data.

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AUTHOR DISCLOSURE STATEMENT

The authors have no conflict of interest to declare.

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