

Improper Use of Traditional Medicine “Anbar Nesara” for Wound Infection: A Case Report

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Received: 11 Mar 2023

Accepted: 16 Apr 2023

Abstract

In Iranian traditional medicine, donkey dung, known as "Anbar-Nesara" is used for its antimicrobial and antiallergic properties. Incorrect medical beliefs can lead to the incorrect use of complementary medicine and the creation of unnecessary harmful effects. Although there have been many reports about the traditional medical benefits and the use of Anbar-Nesara, we describe a woman with severe wound infection following surgical and administration of Anbar-Nesara smoke.

Keywords: Anbar-Nesara; Vulvar intraepithelial neoplasia; Traditional medicine

Introduction

Traditional medicine has always been popular. People's beliefs about the naturalness and harmlessness of traditional medicine are one of the reasons for its popularity [1]. About 80% of the population uses traditional medicines for health care in developing countries [2]. There is often a lack of quality data regarding the safety of traditional medicine [1]. Therefore, due to the absence of international standards and proper methods for evaluation of the effects of traditional medicine, it is vital to share the available information and experiences [3].

Plant and animal products are used for traditional medicine. There are mentions of different animals [e.g. the horse, dog, fox, donkey, crocodile, etc.] for treatment of different diseases in Persian Medicine. Among them, donkey dung, known in Persian language as “Anbar-Nesara”, is still available in traditional medicine stores in Iran [4]. It is used for treatment of skin ulcers, chickenpox rashes, oral in-

flammatory lesions like aphthous ulcer, and inflammatory conditions like otitis interna and externa [5]. However, few studies have investigated the antimicrobial and wound healing effects of Anbar-Nesara. Incorrect medical beliefs can lead to the incorrect use of complementary medicine and the creation of unnecessary harmful effects. Although there have been many reports about the traditional medical benefits and the use of Anbar-Nesara, here we present a case of the incorrect use of traditional medicine which caused a medical complication.

Case Report

A 34-year-old woman with no past medical history referred to the women's clinic of Arash Hospital, Tehran University of Medical Sciences, Tehran, Iran with a complaint of pruritic vulvar lesions. On examination, several dark-colored velvet-like lesions were observed in the genital area. The lesions were in perineum and labia major of the vulva. Vulvar in-

Citation: Vahid Dastjerdi M, Ghahghaei-Nezamabadi A, Tehranian A, Mansouri P, Hosseini L. **Improper Use of Traditional Medicine “Anbar Nesara” for Wound Infection: A Case Report.** Trad Integr Med 2023;8(3):275-277.

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traepithelial neoplasia (VIN) was suspected and the patient underwent colposcopic examination of the cervix and vulva. Acetowhite changes were observed in the cervical 6 and 12 o'clock positions favoring low grade cervical lesions and biopsy was taken from cervical and vulvar lesions. Pathological study revealed cervical intraepithelial neoplasia (CIN 1) for cervical lesion and VIN 2, and VIN 3 for vulvar lesions. The patient was scheduled for surgical removal of the vulvar lesions using wide local excision and follow up of cervical lesions. Post-surgical pathology report was compatible with VIN 2 and VIN 3 with sufficient intact margins. Accordingly, the patient was discharged with wound care instructions. The patient had a trauma to the perineal region five days after surgery resulting in the disruption of the sutures. The patient used Anbar-Nesara smoke for wound healing for 5 days without consulting her physician. Subsequently, she presented to the clinic with a fever, purulent discharge, redness, and genital cellulitis and underwent wound irrigation and broad spectrum antibiotic treatment. The wound was managed through secondary wound closure and observed until complete healing. The wound healed with a scar and there is no lesion in favor of VIN after two years of follow up.

Discussion

Traditional medicine has used for treatment of several diseases, even cancers. Although there are reports of the usefulness of traditional medicine, false beliefs about traditional medicine and its use can be associated with serious complications [6-8]. In many cases, traditional medicine cannot replace medical treatments. Vulvar intraepithelial neoplasia (VIN) is precancerous skin condition of the vulva. Infection with Human Papilloma Virus (HPV) has a crucial role in creation of VIN particularly in young women. It may occur at any age but recent studies have shown that it is more prevalent in women over 50 years [9].

VIN is diagnosed through examination of the vulva and biopsy, and is divided to low-grade and high-grade histologically. There are a limited number of randomized controlled trials about its treatment and there is no consensus about the best treatment option [10].

The classic treatment of high-grade lesions includes excision or vulvectomy in case of extensive lesions. VIN treatment may be associated with pain, delayed wound healing, wound discharge, vaginal shortening or stenosis, and sexual dysfunction [11]. According to available studies, the prevalence of wound infection following vulvectomy is 5.6-58% depending on the extent of surgery [local excision, partial vulvectomy, or radical vulvectomy]. However, there is little information available on the risk factors associated with wound infection in vulvectomy [5]. In Persian Medi-

cine, Anbar-Nesara smoke (female donkey dung mostly collected after labor in the early spring) is used for treatment of skin ulcers, chickenpox rashes, oral inflammatory lesions like aphthous ulcer, and inflammatory conditions like otitis interna and externa [12]. In the present case report, the patient used Anbar-Nesara smoke to enhance the healing of vulvar surgical wound following disruption of sutures due to trauma, which resulted in wound infection. Many treatment recommendations for Anbar-Nesara are based on experience and few studies have investigated the wound healing and antimicrobial properties of its smoke.

Dehkordi et al. found that the Guajol® ointment (containing Anbar-Nesara smoke condensate at a concentration of 5.00%) improved second-degree burn wound healing in rats. Complete healing on day 21 confirmed the healing effects of Guajol® 5.00% ointment considering the low level of inflammatory reactions, neutrophils and hemorrhage, as well as the presence of differentiated tissues and hair follicles in skin layers. The authors reported that this effect could be caused by aromatic hydrocarbons and xylene-based compounds resulting from heating Anbar-Nesara. [2]. However, since high temperatures are applied in the process of synthesizing the cream, it is free of any pathogens and harmful material.

In another study, the researchers used a solution containing Anbar-Nesara smoke dissolved in propylene glycol, known as ANNAS, wounds created on the dorsum of male Wistar rats. The results showed that ANNAS improved wound healing and decreased scarring [12]. Moreover, it has been reported that the cow and goat dung also have high burn wound healing effects. Use of smoke, hot metals, dung, and animal and plant products for treatment of wounds and burns is a common practice in some African countries [2].

Shaikh and Shaikh reported that ashes from buffalo dung had wound healing effects in a rabbit model [13]. However, Justin-Temu et al. found that application of cow or goat dung may contaminate the wound, resulting in new infections including tetanus and septic wounds increasing the length of hospital stay [14].

Although there are studies that have reported the therapeutic effects of some herbal medicines, other studies have shown that traditional medicinal products contain banned pesticides, microbial contaminants, heavy metals, chemical toxins or orthodox medicines. Studies have also been reported on the toxic effects of traditional medicine. There is a widespread misconception that herbal medicines are derived from natural sources and are therefore non-toxic and safe [15]. Accordingly, there is a significant difference between what medical science has revealed about herbal medicine and public perception. There are a number of implications of the common use of herbal medicines,

including possible delays in medical intervention and abandonment of medical treatments. It has been found that the tendency to use both treatment methods at the same time can compromise the effectiveness of medical treatment [15].

Nonetheless, in our case, Anbar-Nesara smoke was associated with wound infection.

Conclusion

The use of Anbar-Nesara smoke for wound disinfection caused wound infection in our patient. Therefore, until further studies in this field, the consumption of Anbar-Nesara should be done with caution.

Conflict of Interests

The authors have no conflicts of interest to declare.

Acknowledgements

The authors would like to thank the Clinical Research Development center of Arash women's Hospital, Tehran University of Medical Sciences, Tehran, Iran for their support, cooperation and assistance throughout the period of study.

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