Honey as an alternative management of vulvar ulcers in a young patient with Behcet's Syndrome*

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ABSTRACT

This is the case of a 19 year-old woman who presented with recurrent vulvovaginal, cervical and oral ulcers. In addition to steroid treatment, she underwent surgical wound debridement followed by topical treatment of the lesions with honey which showed favorable results. The aim of this case report is to present the wound healing properties of honey since there are no previously documented case on honey as a treatment in Behcet's ulcers.

Keywords: Behcet's Syndrome, Honey, Ulcers

INTRODUCTION

Behcet's disease, also called Behcet's syndrome, is a rare case of vascular inflammation. It may present differently from person to person ranging from oral ulcers, genital lesions to uveitis. The prevalence of this disease is highest in East Asian and the Mediterranean countries[1]. This is also distributed in the Asian countries, but a nationwide survey has not been performed in the country yet. There is no local report on the prevalence of Behcet's Disease.

A study published last February 2016 by Ilhan et al entitled "Fatigue in patients with Behcet's Syndrome: Relationship with Quality of Life, Depression, Anxiety, Disability and Disease activity," concluded that fatigue is common in clinically BS patients. Depression, anxiety and physical dysfunction were significantly associated with fatigue and thus the need to explore this rare disease is not only a medical mystery but also a psychological and emotional battle.

The management of chronic wounds such as Behcet's ulcers is a large burden on the health sector and causes substantial suffering for the patients. A review by Molan 2 in the Journal of Wound Care investigated the therapeutic potentials of uncontaminated, pure honey. They concluded that honey has shown a positive influence on wound healing and it is an ideal substance to use as a wound dressing material. This report is to document the effect of honey as an alternative wound dressing and topical treatment of healing Behcet's ulcers, particularly in the vulvovaginal area.

CASE

This is a case of a 19 year-old female who came in for painful vaginal ulcers for 2 months associated with fever and oral ulcers. She has no known diseases during her childhood. Her family history is non-contributory to her disease. She is currently in second year college but had to stop due to the physical limitations caused by the disease. The patient is a nulligravid with menarche at 13 years-old, menses occurring at regular monthly interval lasting for 3-4 days consuming 2-3 pads per day and had no episodes of dysmenorrhea. She has no coitus and denies any vices.

Two years prior to admission, the patient visited an ophthalmologist to consult her eye redness and was diagnosed with uveitis. She then sought consult for the recurring oral ulcers and fever. She had several shallow ulcers measuring 0.3 to1.0 cm in size, evenly distributed in buccal mucosa and are tender on slight touch. These had irregular edges with dirty base covered by grayish fibrin deposits. The oral ulcers improved with oral hygiene using chlorhexidine gargle 3x a day. She was managed as a case of Behcet's syndrome rule out Non-Pulmonary Tuberculosis and was started on Prednisone (10mg/tab) 1 tab 3x a day and antinbitocs such as Azythromycin and Silgram. Wound swab specimens were sent for Gram Stain, Culture and Sensitivity and AFB smear. The Gram Stain and Culture Sensitivity results showed chronic inflammation and no growth. AFB test is also negative.

On follow up, she noted decrease in pain severity and wound size with improvement in the wound granulation. In the interim, there was temporary resolution of the ulcers however, when Prednisone was discontinued the ulcers recurred after 2 days, usually after menstruation. During this time, she noticed that the ulcers with the same characteristics as before, are now found in her medial thighs and are more tender and greatly interferes

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with ambulation and daily activities. On pelvic exam, there were tender ulcers ranging from 4.3x 0.5 cm in size distributed in the right and left labia majora and minora, vaginal mucosa and cervix. These ulcers had jagged edges with dirty necrotic base and extremely tender to touch. It has profuse yellowish discharge. On speculum exam, there were several ulcers on the upper one third of vagina with the same appearance as with the vulvovalvular ones. The sizes range from 0.3 and 1.0 cm. Admitting impression was Behcet's Syndrome and the plan was for wound debridement.

On debridement, the incision was applied on the border of necrotic to normal tissue. There was note of absence of visible blood vessels as evident by absence of bleeding. The affected tissue was gray in color and avascular. The debridement was extended deeper until reddish tissue was appreciated and bleeding was already evident. The involved tissue that was excised was 1.5-2.0 thick. Vulvar tissue, debridement was sent to histopathology and results showed fragments of skin, fibromuscular and adipose tissue with granulation tissue and no specific orders.

The patient used wild honey post operatively as dressing. She soaked sterile gauze with honey and packed ulcers then covered them with dry sterile gauze and closed with cling wrap plastic. She would change the dressing once the gauze is soaked already. There were no added ointments or antibiotics given to her.

On follow up after a month, there was a significant improvement in the said ulcers. They became smaller in size and have smooth regular borders with no necrotic areas.

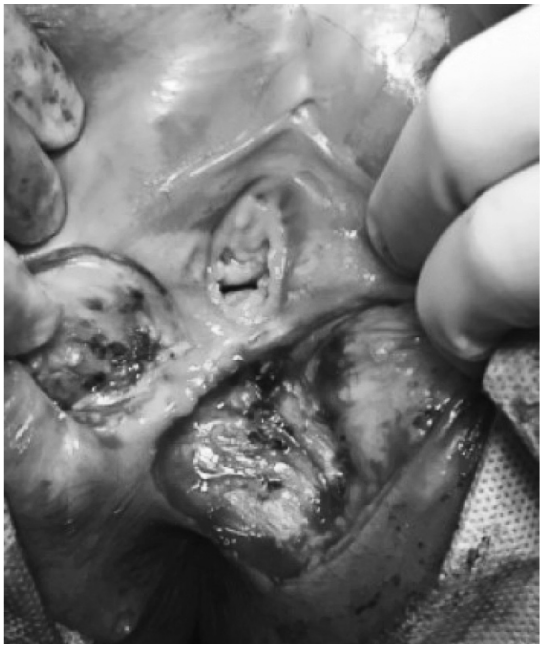

Figure 1. Vulvar ulcers prior to debridement and application of honey

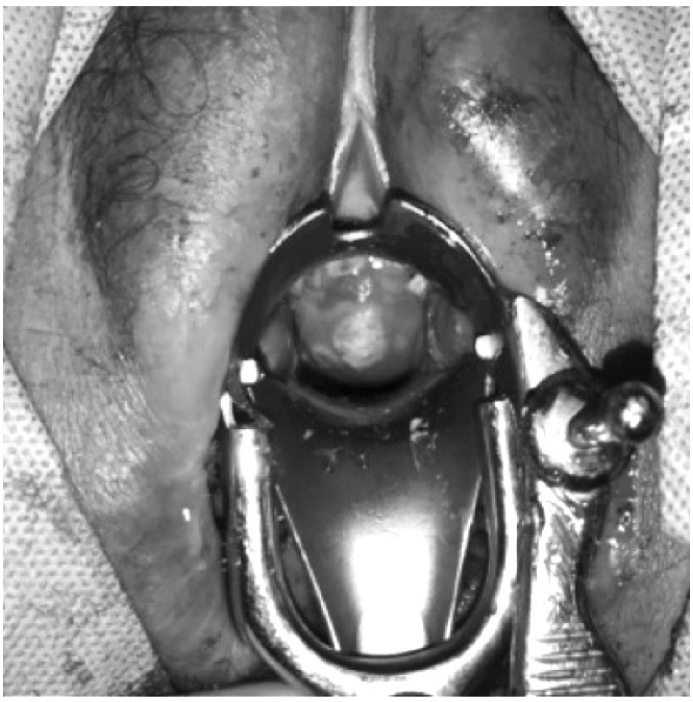

Figure 2. Cervical ulcers prior to debridement and application of honey

Figure 3. Post debridement and honey application

DISCUSSION

Behcet's disease may have been described by Hippocrates, but it was made known to the modern medical community by Hulusi Behcet. This disease is remarkable for its ability to involve blood vessels of all sizes

on both the arterial and venous sides of the circulation. BD is a rare multi-systemic vasculitic disorder; its prevalence varies geographically from 80-370 patients per 100,000, inhabitants in Turkey to 13.5-20 per 100,000 in Asia and the Middle East to 1-2 per 1 million in the United States. It has a higher prevalence along the historic "silk route," including Middle and East Asia[3].

CLINICAL PRESENTATION

The most common clinical feature in patients with Behcet's syndrome is the presence of recurrent and painful mucocutaneous ulcers. Oral and genital ulcers, together with cutaneous, ocular, and articular lesions are the most frequent features. The most common sites include lips, buccal mucosa, tongue soft palate. It starts as a slightly raised and erythematous area with vesicle-putules turning into an ulcer within 2-3 days with rolled bordered and grayish yellow necrotic base. These lesions can be debilitating, affecting the activities of daily life. Healing usually is within 4 weeks. These cutanaeous lesions can be acneiform that shares characteristic microbiological flora with papulopustular lesions of acne. These are often not sterile and may contain Staphylococcus aureus and prevotella.

DIAGNOSTICS

The diagnosis of BD (Behcet's Disease) is primarily based on clinical criteria following the exclusion of other conditions. The criteria consists of recurrent oral ulcer plus 2 any two of recurrent genital ulcers. There are no pathognomonic laboratory tests to clinch the diagnosis of Behcet's. In this case, the clinical criteria was satisfied.

TREATMENT

According to Smith and Yazici's review on the management of Behcet's syndrome, it consists primarily of case reports and small case series with only few follow up studies to confirm findings of preliminary reports and few randomized clinical trials[6]. A systematic review from the Cochrane Database doubted the efficacy of several classic treatments including colchicne, cyclophosphamide and glucocorticoids due to lack of randomized control studies. This paper will document honey as a new player in treating mucocutaneous lesions (recurring ulcers).

In 1989, an editorial in the Journal of the Royal Society of Medicine mentioned the renaissance of the use of honey in wound treatment. It was emphasized that "The time has now come for conventional medicine to life the blinds off this 'traditional remedy' and give it its due recognition[4]." Honey was used in a lot of ways, from rotten and hollow ulcers to sunburn.

There are many reports in the clinical literature of honey being used with success in the treatment of a wide range of wounds. There are numerous reports where wounds that had not been responding to conventional treatment improved with honey. One of these reports[5] was of 9 infants who had large infected surgical wounds still open and oozing pus after treatment with IV antibacterials and chlorhexidine solution. There was a significant clinical improvement after 5 days of dressing with honey. The wounds were closed, clean and sterile. A journal article by Molan, mentioned five special characteristics of honey that makes it superior in topical wound treatment. He enumerated its ability to produce antibacterial, deodorising, debriding and anti-inflammatory actions and most especially stimulation of tissue growth.

The composition of honey provides a moist environment for optimum healing, oxygenation and nutrification for the traumatized tissue increasing the rate of growth of granulation tissue[4]. The antibacterial potency of honey is to completely inhibit the common species of wound-infecting bacteria, with little variation in the sensitivity of *S. aureus and Pseudomonas*. Honey's antibacterial activity is thought to be due primarily to the presence of hydrogen peroxide generated by the action of an enzyme that the bees add to nectar[5]. It also has high levels of antioxidants, protecting wound tissues from oxygen radicals that may be produced by the hydrogen peroxide if in high concentration. There are 13 lactic acid bacteria symbionts isolated from the honeybee and are said to be important players in producing antimicrobial substances.[2]

Honey also activate the body's immune system as it stimulates mitogenesis in B and T lymphocytes and activates neutrophils which supply glucose and essential for the respiratory burst of phagocytes[5]. There is also a rapid autolytic debridement of wounds is a result from the activation of proteases in the wound tissue.

After 4 weeks of applying honey there was a significant improvement in the ulcers. The patient was able to return to her domestic daily life. There were no exacerbations of the ulcers since then.

Behcet's disease typically has a waxing and waning course characterized by exacerbations and remissions. Though disease activity may decline with passing years, disease burden may rise due to cumulative ocular, neurologic or vascular damage.

CONCLUSION

Honey is the most ancient wound dressing known. It is selected to have a good antibacterial activity and provides a moist healing environment, Its promotion of rapid healing and minimization of scarring has a great potential in chronic diseases such as Behcet's. ■

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