

The Efficacy of MYRRH in Oral Ulcer in Patients with Behcet's Disease

Jamal Albishri

Taif University
P.O BOX 11153, 21944, Taif, Saudi Arabia
E.mail Jbeshri@Gmail.com, Phone: + 966501737212

Abstract

Objective: To evaluate the efficacy of Myrrh mouth wash for oral ulcers in the patients with Behcet's disease.

Subjects and Methods: A prospective observational study was conducted at Tadawi clinic in Taif during the period from Sep 2015 to Aug 2016. A total of 16 patients with Behcet's disease fulling the classification criteria of the International Study Group for Behcet's disease were recruited. The Myrrh was used as a "mouth wash" for four times per day for a week. Pain level and ulcer size were measured with visual analogue scale (VAS) and manual measurement tool, respectively.

Results: 50% and 18.75% of the patients reported complete pain relief and complete ulcer resolution, respectively. Similarly, 37% of the patients observed 43-75% reduction in pain while 43.75% of the patients observed 30-67% reduction in the size of oral ulcers.

Conclusion: Myrrh may be effective for the oral ulcer in the patients with Behçet's disease.

{**Citation:** Jamal Albishri. The efficacy of MYRRH in oral ulcer in patients with Behcet's Disease. American Journal of Research Communication, 2017, 5(1): 23-28} www.usa-journals.com, ISSN: 2325-4076.

Introduction

Myrrh is a dried, aromatic, oleo-gum resin (OGR); obtained from the bark of trees which belong to *Commiphora* species of plants [1, 2]. In medicine, myrrh extract possesses medicinal properties and it has been used in various conditions as an anti-inflammatory [2], anti-infectious [3], anti-septic [4], anti-cancer [5], anti-spasmodic [6, 7], analgesic [8] and wound-healing agent

[9, 10]. The products of myrrh have shown their efficacy in the treatment of oral aphthous ulcers [2, 4]. Mansour et al. [2] conducted a randomized controlled trial (RCT) having 90 patients with minor recurrent aphthous stomatitis (MiRAS), comparing the efficacy of newly developed product “aloe- and myrrh-based gels”. They reported that aloe was superior to myrrh in terms of reducing size and erythema of ulcers while myrrh was superior to aloe in terms of reducing ulcer pain.

Behcet’s disease is a rare, autoimmune vasculitic disorder characterized by the triad of symptoms: recurrent oral ulcers, genital ulcers and ocular inflammation [11]. The origin of this disease is unknown and its diagnosis is based on clinical set of symptoms as there is no specified test for its diagnosis. Oral ulcers are one of the major features of Behcet’s disease while myrrh has shown its efficacy in the treatment of aphthous ulcers. Moreover, Fatani et al. [7] have demonstrated potent therapeutic value of myrrh in inflammatory bowel disease (i.e. self-induced ulcerative colitis) in 36 male Wistar albino rats. Therefore, myrrh may be efficacious in the management of oral ulcers in Behcet’s disease. This pilot study was designed to determine the efficacy of “myrrh mouth wash” in the management of oral ulcers in patients with Behcet’s disease. It is an important addition to the literature regarding the treatment of oral ulcers in the patients of Behcet’s disease.

Subjects and Methods

The study was conducted at Tadawi clinic in Taif during the period from September 2015 to August 2016. The patients who fulfilled the classification criteria of the International Study Group for Behcet’s disease were included in the study [12]:

- The patients with new oral ulcer
- The patients who had no change in treatment for previous two months
- The patients who had ability to record their visual analogue scale (VAS) and to report in our hotline any new complaint

The Myrrh was used as a “mouth wash” for four times per day for a week provided we had continued same previous treatment. Total of 16 patients were recruited in the study after having informed consent. The basic clinical examination was done at days 1 and 7. Number and size of oral ulcers and degree of pain were recorded at day 1. The patients were asked to use visual analogue scale (VAS) for pain (1-10 scale) and to report any new symptoms every day at the same time i.e. 10:00 am. Also, no new medication had been instructed during that week. The repeated clinical examination again was done at day 7. Manual calculations and percentages are explained in tabulation form.

Myrrh Mouth Wash: A cup of boiling water (235 ml) was poured on four teaspoons of dried myrrh (20-30 gm) placed in a bottle. The ingredients were steeped and chilled over night to strain. The patients were instructed to use 30 ml as a mouth wash four times per day.

Results

Total of 16 patients (age: 23-45 years; male to female ratio: 10:6) with painful oral ulcer were recruited in the study. Six patients had ulcer size <5 mm, seven patients had ulcer size >5 mm while three patients had herpetiform ulcer >5 mm. The main results were complete pain relief in 50% of the patients within 48 hours. Table-1 and table-2 show the effect of Myrrh on pain level and oral ulcer size after one-week of application.

No. of patients	%age of patients	Pain level
8	50%	Complete relief
6	37%	43-75% reduction
2	12.5%	No response

No. of patients	%age of patients	Pain level
3	18.75%	Complete resolution
7	43.75%	30-67% reduction
6	37.50%	No change

Discussion

On its own, this is the first pilot study carried out to evaluate the efficacy of myrrh in terms of the treatment of oral ulcers manifested by the patients with Behcet's disease. The study has come out with the outcome that myrrh or its products have capability to treat oral ulcers and pain in the patients with Behcet's disease as 50% and 18.75% of the patients with painful oral ulcers reported complete pain relief and complete ulcer resolution respectively, within a week of treatment using mouth wash prepared of myrrh.

Behcet's disease is a chronic multisystem inflammatory disorder where oral and genital ulcers are included in the major diagnostic criteria [13]. Studies have shown that >98% patients with Behcet's disease suffer from recurrent aphthous ulcers (RAU) while >84% patients present with oral aphthous ulcers [13-15]. In other words, recurrent painful oral ulcers are the most common presentation in the patients with Behcet's disease. These oral ulcers are indistinguishable from the common oral aphthous ulcers. Such oral ulcers may be small (pinpoint flat) or large and shallow or deep with central yellowish base and punched-out margins [16]. On the basis of their

size and severity, ulcers can be divided into three types: minor, major and herpetiform. In the patients with RAU, minor trauma can trigger the ulcer development.

As the oral aphthous ulcers are very painful and affect the patient's daily life, it is necessary to treat them timely. Topical and systemic preparations have been developed to treat oral aphthous ulcers in the patients with Behcet's disease. Topical applications include topical anesthetics (e.g. lidocain as 1% cream, combination of tetracaine 0.5% and polidocanol 0.1%), antiseptic and anti-inflammatory agents (e.g. 0.15% triclosan dissolved in ethanol and zinc sulfate as mouth wash, Diclofenac 3% in a 2.5% hyaluronic acid gel, 5-aminosalicylic acid 5% cream), cauterization, topical tetracyclines and topical corticosteroids [13, 17-20]. Systemic preparations include colchicines, pentoxifylline, systemic corticosteroids, sucralfate, dapsone, antimetabolites, cyclosporine and various others [13, 16, 21]. However, major concern of these agents is symptomatic relief of oral aphthous ulcers.

As mentioned above, myrrh has anti-inflammatory, anti-infectious, anti-septic, anti-spasmodic, analgesic, anti-cancer and wound-healing properties [2-10]. In this context, Behcet's disease is regarded as a multisystem auto-inflammatory disorder and recurrent oral ulcers in this disease are known to be due to inflammatory efflorescence of the oral mucosa [11, 13]. Consistent with these findings, anti-inflammatory agents such as topical diclofenac and corticosteroids have shown their role in the treatment of oral aphthous ulcers [22, 22]. Recently, Mansour et al. [2] have documented the efficacy of newly developed product "aloe- and myrrh-based gels" in the treatment of MiRAS. In another study, it has been reported that myrrh stimulates plasma cells production and helps angiogenesis which in turn enhances wound repair [23, 24]. In this way, myrrh seems to be effective for wound healing as well as for the treatment of aphthous ulcers. On the contrary, Al-Mobeeriek [4] conducted an experimental study on 100 male rats comparing the efficacy of 1 mL of 0.2% myrrh solution, 0.2% chlorhexidine gluconate and 0.25% tetracyclinemyrrh in terms of healing of a self-induced wound on buccal mucosa in an animal model. They reported that low concentration suspension of myrrh promoted healing and repair of rats' buccal mucosa over a short term (<2 weeks) while induced severe combined acute and chronic inflammation and necrosis when used in excess or over long period of time. For the way of explanation, myrrh should be used carefully as it may cause toxic effects if used in excess or for longer periods.

In the present study, myrrh has shown its efficacy, to some extent, in the management of oral aphthous ulcers in the patients suffering from Behcet's disease in the first week of treatment. Although myrrh showed positive role in the management of oral ulcers; however, more randomized controlled trials are required to document its efficacy and safety. Being the first study to evaluate the efficacy of myrrh in the treatment of oral aphthous ulcers in the patients suffering from Behcet's disease, it will encourage other researchers to conduct large studies in future to determine the exact efficacy and safety of this herbal medicine i.e. "myrrh extract" in the treatment of oral aphthous ulcers as a complementary and alternative (CAM) therapy.

CAM is widely used by Saudi adolescents. Usually, they use CAM for common symptoms; honey and black cumin therapies being the top ones [25]. Currently, there are no guidelines available for the use of CAM therapies in Arab Gulf countries. Therefore, policy makers should consider the risk and safety profiles of CAM therapies, especially among children where improper dosing of these therapies can produce monstrous outcomes.

Conclusion

Myrrh may be effective for the oral ulcer in the patients with Behçet's disease. Large controlled studies are needed to document its exact efficacy and safety over short-term and long-term uses.

References

1. Nomicos EY. Myrrh: medical marvel or myth of the Magi? *Holist Nurs Pract.* 2007;21(6):308-23.
2. Mansour G, Ouda S, Shaker A. Clinical efficacy of new aloe vera- and myrrh-based oral mucoadhesive gels in the management of minor recurrent aphthous stomatitis: a randomized, double-blind, vehicle-controlled study. *J Oral Pathol Med.* 43(6):405-9.
3. Tonkal AM, Morsy TA. An update review on *Commiphora molmol* and related species. *J Egypt Soc Parasitol.* 2008;38:763-96.
4. Al-Mobeeriek A. Effects of myrrh on intra-oral mucosal wounds compared with tetracycline- and chlorhexidine-based mouthwashes. *Clin Cosmet Investig Dent.* 2011;3: 53–8.
5. Mao JJ, Farrar JT, Xie SX, Bowman MA, Armstrong K. Use of complementary and alternative medicine and prayer among a national sample of cancer survivors compared to other populations without cancer. *Complement Ther Med.* 2007;15(1):21–9.
6. Vissienon C, Goos KH, Goos O, Nieber K. Antispasmodic effects of myrrh due to calcium antagonistic effects in inflamed rat small intestinal preparations. *Planta Med.* 2015;81(2):116-22.
7. Fatani AJ, Alrojaye FS, Parmar MY, Abouhashih HM, Ahmed M, Al-Rejaie SS. Myrrh attenuates oxidative and inflammatory processes in acetic acid-induced ulcerative colitis. *Exp Ther Med.* 2016;12(2):730–8.
8. Krinsky DL, Hawkins EB, Pelton R, Willis NA, La-valle JB. *Natural therapeutics pocket guide.* 2nd edn. Cleveland: LexiComp, Inc, 2003: 379.
9. Haffor AS. Effect of myrrh (*Commiphora molmol*) on leukocyte levels before and during healing from gastric ulcer or skin injury. *J Immunotoxicol.* 2010;7(1):68-75.
10. Gebrehiwot M, Asres K, Bisrat D, Mazumder A, Lindemann P, Bucar F. Evaluation of the wound healing property of *Commiphora guidottii* chiov. ex. guid. *BMC Complement Altern Med.* 2015;15:282.

11. Keogan MT. Clinical Immunology Review Series: An approach to the patient with recurrent orogenital ulceration, including Behçet's syndrome. *Clin Exp Immunol.* 2009;156(1):1–11.
12. Criteria for diagnosis of Behçet's disease. International Study Group for behçet's disease. *Lancet.* 1990;335(8697):1078-80.
13. Altenburg A, El-Haj N, Micheli C, Puttkammer M, Abdel-Naser MB, Zouboulis CC. The treatment of chronic recurrent oral aphthous ulcers. *Dtsch Arztebl Int.* 2014;111(40):665–73.
14. Altenburg A, Mahr A, Maldini C, Kneifel CE, Krause L, Kotter I, et al. Epidemiology and clinical aspects of Adamantiades-Behçet disease in Gemany. *Current data. Ophthalmologe.* 2012;109:531-41.
15. Yurdakul S, Yazici H. Behçet's syndrome. *Best Pract Res Clin Rheumatol.* 2008;22(5):793-809.
16. Elbendary AM, Elston DM. Dermatologic aspects of Behcet's disease clinical presentation [Internet]. 2016 [cited Sep 21, 2016]. Available from: <http://emedicine.medscape.com/article/1122381-clinical#b4>.
17. Descroix V, Coudert AE, Vige A, Durand JP, Toupenay S, Molla M, et al. Efficacy of topical 1% lidocaine in the symptomatic treatment of pain associated with oral mucosal trauma or minor oral aphthous ulcer: a randomized, double-blind, placebo-controlled, parallel-group, single-dose study. *J Orofac Pain.* 2011;25(4):327–32.
18. Skaare AB, Herlofson BB, Barkvoll P. Mouthrinses containing triclosan reduce the incidence of recurrent aphthous ulcers (RAU). *J Clin Periodontol.* 1996;23:778–81.
19. Belenguer-Guallar I, Jimenez-Soriano Y, Claramunt-Lozano A. Treatment of recurrent aphthous stomatitis. A literature review. *J Clin Exp Dent.* 2014;6(2):e168–e74.
20. Alidaee MR, Taheri A, Mansoori P, Ghodsi SZ. Silver nitrate cauterly in aphthous stomatitis: a randomized controlled trial. *Br J Dermatol.* 2005;153:521–5.
21. Altenburg A, Zouboulis CC. Current concepts in the treatment of recurrent aphthous stomatitis. *Skin Therapy Lett.* 2008;13(7):1-4.
22. Saxen MA, Ambrosius WT, al Rehemtula KF, Russell AL, Eckert GJ. Sustained relief of oral aphthous ulcer pain from topical diclofenac in hyaluronan: a randomized, double-blind clinical trial. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 1997;84:356–61.
23. Russo A, Russo G, Peticca M, Pietropaolo C, Di Rosa M, Iuvone T. Inhibition of granuloma-associated angiogenesis by controlling mast cell mediator release: Role of mast cell protease-5. *Br J Pharmacol.* 2005;145(1):24–33.
24. Young J, Liu C, Butler G, Cohn Z, Gallitt S. Identification, purification, and characterization of a mast cell-associated cytolytic factor related to tumor necrosis factor. *Immunology.* 1987;84(24):9175–9179.
25. Musaiger AO, Abahussain NA. Attitudes and practices of complementary and alternative medicine among adolescents in Saudi Arabia. *Glob J Health Sci.* 2014;7(1):173-9.