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COMPARATIVE STUDY OF ALOE VERA AND TRIAMCINOLONE ACETONIDE 0.1% IN TREATMENT OF RECURRENT APHTHOUS STOMATITIS

Dentistry

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ABSTRACT

Introduction: It hasAloe vera (AV; named Aloe barbadensis in Latin), a plant of dry and warm weather, contains polysaccharides,anthraquinone, lectin, superoxide dismutase (an antioxidant enzyme), glycoprotein, amino acids, vitamin C and E and minerals.It has been used for the management of oral lesions such as oral lichen planus, oral submucous fibrosis ,radiation-induced mucositis, burning mouth syndrome,xerostomia, recurrent aphthous ulcers. **Aim:** The aim of this study is to the compare the effects of the topical aloe vera gel and triamcinoloneacetonide 0.1% in patients with minor ulcers of aphthous stomatitis. **Materials and Methods:** Forty patients presenting with clinical signs and symptoms of aphthous stomatitis were included for the randomized single blinded study after informed consent. Group A patients received topical aloe vera gel and Group B patients received topical triamcinolone acetonide 0.1% three times a day for 7 days or till the ulcer heals completely. The parameters such as the size of the ulcer, burning sensation, and pain were recorded at each visit. **Results:** In this study, triamcinolone acetonide 0.1% oral paste was found to be effective than aloe vera in wound healing. In contrast, aloe vera gel had a better response in terms of pain and burning sensation. **Conclusion:** Aloe vera hasa wide spectrum of unique properties and uses. It is a promising agent in treating oral lesion in the field of oral medicine. It can be used as analternative medicine and in patients who are allergic to steroid medication.

KEYWORDS

Aloe vera, aphthous stomatitis, triamcinolone acetonide 0.1%, wound healing

INTRODUCTION

Recurrent aphthous stomatitis (RAS) is one of the most common oral cavity lesions, with a wide range of reported prevalences from 5 to 50% in different populations. It is a recurrent spontaneously healing lesion mostly affecting the lips, soft palate and throat in children and young adults. The frequency of RAS recurrence declines by age, and it seems to be less common in males compared with females. It causes not only pain but could also decrease the quality of life by interfering with swallowing, drinking, eating and even speaking.

Aloe vera is available in various forms for topical applicationsuch as toothpaste, mouthwash, gel, topical spray and juice for systemic usage.

Corticosteroids are the main stay for treatment which includes topical, systemic or intralesional approach. Newer drugs have the ability to stick firmly to the wet, moving mucous, forming a protective film over the ulcer, leading to faster pain relief and rapid healing. The commercially available paste is to be applied 2–3 times a day. Other topical corticosteroids include triamcinolone acetonide, clobetasol propionate 0.05%, and fluocinonide 0.05%.There are very few studies done showing the effects of aloevera on recurrent aphthous stomatitis. Therefore, the aim of this study is to the compare the effects of the topical aloe vera gel and triamcinolone acetonide 0.1% in patients with minor ulcers of aphthous stomatitis.

MATERIALAND METHODS

Forty patients aged between 15 and 35 years with minor recurrent aphthous singular lesions on their buccal mucosa and mucosal zone of the lips (after a medical diagnosis of RAS minor) without any other medical complications who had noticed oral lesions during the last two days were randomly assigned to receive either A.V. gel or triamcinolone acetonide 0.1%. The entire sample was divided randomly into two groups with 20 patients. Group A patients received topical aloe vera gel three times a day for7 days or till the ulcer heals completely. Group B patients received topical triamcinolone acetonide 0.1% three times a day for 7 days or till the ulcer heals completely.

Statistical Analysis

The mean and standard deviation for the size of ulcer, VAS scores for pain, and burning sensation were measured using the using Independent Student 't' Test. A $P < 0.05$ was considered statistically significant.

RESULT

The mean VAS score for pain in patients receiving aloe vera gel at the time of visit 1 was 4.5, reduced to 0 at visit 3. The mean VAS score for pain in Group B, that is, patients receiving triamcinolone acetonide 0.1% oral paste at the time of visit 1 was 2.3, reduced to 0 at visit 3. The change in VAS scores for pain at visit 2 (0–3 day)in Group A (patients receiving aloe vera gel) was more as compared to Group B, and the difference was statistically significant ($P < 0.05$)

Interpretation Of The Results

In this study, triamcinolone acetonide 0.1% oral paste was found to be effective than aloe vera in terms of wound healing (measured by the diameter of ulcer); whereas, aloe vera gel had a better response in terms of pain and burning sensation.

DISCUSSION

Aloe vera inhibits the cyclooxygenase pathway and reduces prostaglandin E2 production from arachidonicacid that contributes to its antiinflammatory properties. Babee et al.[12] conducted a case control study in which 40 patients with oral minor aphthous lesions were included.The duration of complete wound healing, pain score, wound size, and inflammation zone diameter in the aloe vera group were significantly lower than the placebo group ($P \leq 0.05$).He concluded that aloe vera gel is effective in reducing the pain score, wound size, and the healing period.

In a study conducted by Salazar-Sa´nchez et al, AV solution consisting of 70% aloe juice was used. 32 cases in the AV group, complete pain remission was achieved in 31.2% of the cases after 6 weeks and in 61% after 12 weeks. In the placebo group, these percentages were 17.2% and 41.6%, respectively. The results of their study revealed that the topical application of AV, 3 times a day, improves the pain, the oral lesions and the oral quality of life of the patients with RAS.

CONCLUSION

In conclusion, our study demonstrated that AV has similar therapeutic effects with TA in the treatment of RAS lesions. AV has both antioxidant and anti-inflammatory effects,which may significantly contribute to its clinical effects. Considering the chronicity of the disease, and the need for the long-term treatment modalities, AV can be proposed as a good treatment for RAS. Our results provide practical hints for better management of RAS, particularly in patients who prefer to use herbal medicine instead of synthetic drugs.

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