

# The Impact of Mucosal Bio adhesive on Oral Aphthous Ulcer Pain and Duration

Amirhossein Jahromi \*

Department and Laboratory of Microbiology, Medical University of Tehran, Iran

## ABSTRACT

**Objective:** Oral plaque is one of the most common oral lesions that occur in the form of recurrent ulcers. Various factors are effective in the etiology of oral plaque, including immune disorders, blood defects and mental stress. Various methods are recommended to treat these lesions, including the use of steroids. In this study, a type of mucosal adhesive was introduced that was examined alone as well as a steroid carrier for the treatment of aphthous ulcers.

**Materials and Methods:** This study was an experimental and double-blind study with simple random sampling. Two groups were studied: the first group (pre-test), including 20 people, who received drug-free adhesive to determine the degree of adhesion and other side effects of mucosal adhesive. The second group, including 20 people, was selected as case and control with a history of minor aphthous ulcer and during two periods of aphthous ulcer, once treated with drug-free mucosal adhesive (control) and again with drug-containing mucosal adhesive (case). Were located. Statistical analysis was performed using student test-T test.

**Results:** In the pre-test group, the duration of adhesion in all subjects was at least 20 minutes and no specific taste or odor or side effects, not reported. In the case and control groups, the time to analgesia and the time to complete recovery were almost the same. Recovery time was shorter after treatment than in pre-treatment patients ( $P < 0.000$ ).

**Conclusion:** Since aphthous ulcer pain is usually due to secondary infection or mechanical and chemical irritation, the use of mucous adhesive as a covering and protective material can cause analgesia and accelerate the healing time. Mouth sores. The presence or absence of triamcinolone in the mucosal adhesive also has an effect on reducing pain and accelerating the duration there is no healing of aphthous ulcers.

**Keywords:** Recurrent aphthous ulcer, mucosal adhesive, Corticosteroid, Triamcinolone acetoneide, Minor aphid.

## INTRODUCTION

Oral aphthous ulcer is a common oral lesion that is usually referred to as recurrent lesions appear on the face and its prevalence in the population It is 60-20% of the factors that cause oral aphthous ulcers Involved are immunological disorders, blood defects, stress They are spiritual and so on. Various treatments to improve or prevention of these lesions is suggested which uses Steroids in various drug forms including Orabase to date the best treatment for oral aphthous ulcers has been New research to use contact glue as a refereeing system and they have also been used alone as a

treatment method . Studies by Kutcher 2001, all in the face Jasmin and 2000 Ludlow , use cyanoacrylate (2-O-C) 2-octyle adhesive mucosa was gone. In all these studies the amount of pain and the duration of recovery and also the size of the wound, due to the use of this type of mucous adhesive, showed a significant decrease. Also, a study by Michele in (2001,) was performed as a mucosal adhesive One, carrier of anesthetic in pain relief, during surgery - scaling planning root, used (10. In the above studies, mucosal adhesive Used from cyanoacrylates, and since the preparation of adhesives Mucus, with these materials requires a high cost, in this study A type of mucous adhesive has been introduced in which the material

\*Corresponding to: Amirhossein Jahromi, Department and Laboratory of Microbiology, Medical University of Tehran, Iran, Tel: 7829197434; E-mail: amirhossein1121@gmail.com

Received date: June 30, 2021; Accepted date: October 08, 2021; Published date: October 19, 2021

Citation: Jahromi A (2021) The Impact of Mucosal Bio adhesive on Oral Aphthous Ulcer Pain and Duration Dentistry. 11:p498

Copyright: © 2021 Jahromi A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

used from The selected natural elements are present in traditional Iranian medicine and the effect Its treatment as a drug delivery system as well as a method Independent therapy has been studied in the healing of aphthous ulcers [1-5].

## MATERIALS AND METHODS

This experimental study was performed in two blinds. Sampling was done by simple random method. In this study, initially 20 people, healthy person without oral aphthous ulcer, without mucous adhesive They used the drug to determine the side effects of the adhesive (previous group Test) Then 20 women, 18 to 24 years old, with a history of minor oral plague Buccal and labial mucosa among volunteer students of the University of Science Babylonian medicine were selected and under two periods of aphthous ulcer attack, under Were treated (case and control groups). These people were asked, that refer no later than 48 hours after the onset of the aphthous ulcer. The base of the desired mucosal adhesive included tragacanth, alcohol, distilled water and sodium benzoate and triamcinolone-containing mucosal adhesives also contain a mucosal adhesive base the active ingredient in the drug is triamcinolone acetonide. All adhesives Mucus size 2cm × 1cm with rounded edges was prepared and in Triple packs was packed with plastic wrap. First the group Pre-test to determine adhesion, allergenicity and others Side effects of mucosal adhesive were examined. In them from Drug-free mucosal adhesive was used once. In the next step, Therapeutic groups (case and control) underwent two pest infestations were treated. In a period for them, containing mucous adhesive Triamcinolone (as the case group) and in another period, mucosal adhesive No triamcinolone was administered (as a control group). Then people Treated, according to the instructions, for 5 days, three times a day and on At equal intervals, each time for 20 minutes of mucus adhesive They used the patients' subsequent visits, one day, three days and five days After the first session, performed in the clinic and oral plague in terms of extent Pain and recovery status were assessed. All findings in the file was collected and analyzed by student t-test[6-10].

## RESULTS

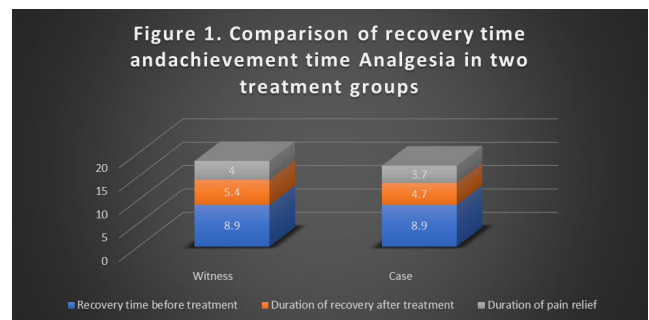
In the pretest group, the duration of adhesion was longer in all individuals It was 20 minutes and the mucous adhesive studied, no odor or taste There was nothing special. Time of aphthous ulcer stability before treatment the mean was 9 days (with a minimum of 4 days and a maximum of 14 days). Period of time Achieve analgesia in case and control subjects after adhesive treatment the mucosa was almost the same (p = 0.074) [11].

**Table 1:** Evaluation of aphthous ulcer status in the first, third and fifth days after mucosal: adhesive treatment.

Profile Of Aphthous Cancer	Wound Conditions after one day	Wound Conditions after three days	Wound Conditions after three days

	Witness	Case	Witness	Case	Witness	Case
The pain felt removed	2	2	10	14	18	18
Elimination of The inflammation aura	-	-	3	9	18	19
Loss of Necrotic part	-	-	3	5	14	18

Also, the recovery time in case patients is shorter than in individuals' was a witness. But their difference was not statistically significant. Period of time Recovery in subjects after treatment was shorter than before treatment was, this difference was statistically significant (Figure 1) (p = 0.000). The result of aphthous ulcer examinations in the first, third and fifth days after Mucosal adhesive treatment is listed in Table 1.



**Figure 1:** Comparison of recovery time and achievement time Analgesia in two treatment groups

## CONCLUSION

For topical treatment of oral lesions or anesthesia Topical oral tissue from various drug delivery systems such as Gels, creams and ointments are used. Since the duration the adhesion of these drug delivery systems to the oral mucosa is short More recent studies have used a type of carrier called a mucosal adhesive. Examined, due to its longer contact with the lesions Oral and its greater adhesion to the oral mucosa, is of interest has been. In Michele's 2001 study of mucosal adhesive as a Drug delivery system to induce local anesthesia before surgery Scaling was used. The mucosal adhesive contains lidocaine and with a Gels containing benzocaine were compared. The amount of pain during scaling in the group that used the mucosal adhesive containing lidocaine, in Compared to the group that used benzocaine gel, significantly showed considerable reduction The use of directional mucosal adhesive Treatment of oral plague, in research, also as the drug delivery system is also considered as an independent treatment Is located. In a study conducted by Moghaddamia et al, (2000) a type of mucous adhesive was introduced that could last for some time Remains in the mouth and has a soothing effect on oral lesions (14 Used

mucosal adhesive as an independent treatment in recovery Oral aphthous ulcers in the Kutcher study, a type of mucosal adhesive with The cyano octyl-2 acrylate formulation is used in the treatment of the pest And it was found that C.O.2 caused a significant reduction in the amount Patients were in pain. In another study by Ludlow and Kutcher (2000) Was performed, also from C.O.2 as a tissue adhesive in the treatment of aphthous ulcers Oral, was used in this study areas of accumulation of aphthous ulcers in individuals Under treatment, they showed a significant reduction and recovery time as well Decreased to 1.9 days. In a study by Jasmin in 1993 on. Children with aphthous ulcers were also assessed, the amount of pain and the duration Recovery by using a type of thirty acrylate as adhesive Mucus was significantly reduced. In the present study, similar to the above studies of mucosal adhesive as an independent treatment (in the control group), in the treatment of oral plague was used and the recovery time and pain rate in these patients underwent It was examined, which according to the results, both parameters in these patients showed a marked reduction. The advantage of this study over the above studies is the use of the elements was natural in making the mucous adhesive. In most studies in the field of using mucosal adhesives, the material used in the preparation the adhesive was cyanoacrylate, which was expensive to make it is also high as a synthetic and chemical substance it can be, that its construction in our country will face many restrictions. But in the present study, the material used in mucosal adhesives, in medicine Traditional of our country is available and easily accessible and to because it is natural, it will be more compatible with the oral mucosa. In this study the mucosal adhesive as a drug delivery system also used (in the case group). Since the difference in meaning You have to reduce the amount of pain and speed up the recovery time, between the two Group therapy was not observed, therefore, mucosal adhesive with natural formula Alone and not as a steroid-containing drug delivery system or Other drugs are effective in treating oral plague. Since

aphthous ulcer pain is usually due to secondary infection and due to mechanical and chemical stimuli , Therefore it can be said that the use of mucous adhesive as a Covering and protective agent,can cause premature analgesia and Accelerate recovery time in prople with oral plague.

## REFERENCES

1. Kalantzis A, Marshman Z, Falconer DT, Morgan PR, Odell EW. Oral effects of low-dose methotrexate treatment. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2005; 100: 52- 62.
2. McCartan BE, Healy CM. The reported prevalence of oral lichen planus: a review and critique. *J Oral Pathol Med* 2008; 37: 447-453.
3. Nolan A, Lamey PJ, Milligan KA, Forsyth A. Recurrent aphthous ulceration and food sensitivity. *J Oral Pathol Med* 1991; 20: 473-475.
4. Miles DA, Bricker SL, Razmus TF, Potter RH. Triamcinolone acetonide versus chlorhexidine for treatment of recurrent stomatitis. *Oral Surg Oral Med Oral Pathol* 1993; 75: 397- 402.
5. Gorsky M, Epstein J, Rabenstein S, Elishoov H, Yarom N. Topical minocycline and tetracycline rinses in treatment of recurrent aphthous stomatitis: a randomized cross-over study. *Dermatol Online J* 2007;
6. Savage NW, McCullough MJ. Topical corticosteroids in dental practice. *Aust Dent J* 2005; 50: S40- S44.
7. Eisen D, Ellis CN. Topical cyclosporine for oral mucosal disorders. *J Am Acad Dermatol* 1990; 23: 1259- 1264.
8. Khan NF, Saeed M, Chaudhary S, Khan NF. Haematological parameters and recurrent aphthous stomatitis. *J Coll Physicians Surg Pak*. 2013;23:124-7
9. Burgess JA, Johnson BD, Sommers E. Pharmacological management of recurrent oral mucosal ulceration. *Drugs*. 1990;39:54-65.
10. Natak SS, Konttinen YT, Enattah NS, et al. Recurrent aphthous ulcers today: a review of the growing knowledge. *Int J Oral Maxillofac Surg*. 2004;33:221-34
11. Sharma JN, Srivastava KC, Gan EK. Suppressive effects of eugenol and ginger oil on arthritic rats. *Pharmacology*. 1994; 49:314-8.