



CASE REPORT

THE USE OF “DIPLIN-S” ADHESIVE MEMBRANE IN THE COMPLEX THERAPY OF RECURRENT APHTHOUS STOMATITIS. (CLINICAL CASE REPORT)

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Received: Oct. 2, 2023; **Accepted:** Oct. 27, 2023; **Published:** Nov. 5, 2023

Абстракт

Recurrent aphthous stomatitis (RAS) is a common ulcerative disease of the oral mucosa. In the etiopathogenesis of this pathology, there is no single concept that would outline the data of the trigger mechanisms that determine chronic recurrent aphthous stomatitis, interpreting the statement of the manifestation of various clinical signs in the oral cavity. The paper presents the results of treatment and dental examination of a patient using the protective adhesive film “Diplen-S” in the complex therapy of chronic recurrent stomatitis (RAS). The use of the adhesive film “Diplen-S” led to a decrease and disappearance of pain, accelerated the healing time and epithelization of aphthae with no side effects.

Conclusion: The positive clinical results obtained, wound healing in an accelerated time, are the basis for recommending the use of the adhesive film “Diplen” in the complex therapy and treatment of RAS, in the practice of stomatology.

Keywords: oral mucosa, “Diplen-S” adhesive membrane, recurrent aphthous stomatitis.

Introduction

The oral mucosa (OM) is an indicator of the state of the body and its relationship with the external environment. Under the influence of unfavorable endogenous and exogenous factors, pathological

processes of an inflammatory and destructive nature arise in the oral mucosa.^{1,2}

Among the numerous lesions of the oral mucosa of various etiologies is chronic recurrent aphthous stomatitis (RAS), which has its own characteristics of manifestation in the oral cavity.^{3,4}

HRAS accounts for 90% of violations of the integrity of the mucous membrane encountered in dental practice - characterized by the occurrence of aphthae (from the Greek aphtha - ulcer) and occurring with periodic exacerbations and remissions.^{5,6}

In the etiopathogenesis of this pathology, there is no single concept that would outline the data of the trigger mechanisms that determine chronic recurrent aphthous stomatitis, interpreting the statement of the manifestation of various clinical signs in the oral cavity.^{7,8} A number of authors point to the role of autoimmune processes in the pathogenesis of recurrent aphthous stomatitis. Those who carried out microscopic studies of the mucous membrane in CRAS found that in almost half of the patients there was a glow along the basement membrane area, and in one third - in the area of the vascular wall.

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The glow was due to the third fraction of complement and deposits of fibrin, sometimes IgM and IgG, so it should be assumed that identified circulating immune complexes play a certain role in tissue damage in RAS.^{11,12} Using intradermal tests, we detected mono- and polyvalent allergies to proteo, streptococcus, staphylococcus and E coli in patients, with which the authors attribute a significant role to bacterial allergy.

In the pathogenesis of aphthous stomatitis, a cross-immune reaction may have a certain significance, since there is a bacterial flora on the oral mucosa and in the intestines, and antibodies produced in its presence may mistakenly attack the epithelial cells of the mucous membrane due to the similarity of their antigenic structure with that of some bacteria.¹³⁻¹⁵

This may well explain the manifestations of the Arthus phenomenon, as well as the significance of gastrointestinal pathology, accompanied by an imbalance between the body and the bacterial flora, in the origin of RAS.¹⁶

The role of gastrointestinal pathology and liver diseases in the pathogenesis of aphthous stomatitis. Found by many authors.^{17,18}

The causes of aphthous stomatitis can also be the presence of malignant tumors in the neck or nasopharynx, the body's reaction to chemotherapy procedures, the presence of AIDS, the use of drugs that reduce salivation, seasonal vitamin deficiency, or a lack of beneficial microelements (iron) in the body.^{13,17}

Taking into account the interpretation of the etiopathogenesis of RAS, where there is no single approach, we can say that this pathology is not completely curable and mainly manifests itself with reduced immunity.

Various treatment methods have been proposed for the treatment of recurrent aphthous stomatitis, but the search for effective treatment methods continues.¹⁸⁻²⁵

In this case, it is necessary to consider the main task of pathogenetic therapy, reducing the risk of relapse using protection of ulcers with the help of various dressings aimed at rapid epithelization of ulcers and the functioning of homeostasis of the oral cavity. Known dressings used in the oral cavity are mainly based on zinc oxide with the introduction of various drugs into its composition (antibiotics, corticosteroids, enzymes, vitamins, etc.). However, they have many disadvantages: they are ungrammatical, functionally and cosmetically do not meet clinical requirements - they are quickly washed off with oral fluid from the wound surface.

The most optimal, in our opinion, is the use of the adhesive membrane "Diplen", developed at the Department of General Chemistry and Therapeutic Dentistry of Yerevan State Medical University, which best meets the clinical requirements for the treatment of CRAS, which was the subject of our research.

Diplen-denta C is a two-layer membrane consisting of combined hydrophilic and hydrophobic layers. The active ingredient "Solcoseryl" is included in the hydrophilic layer of the film. It has a multifunctional effect - it activates the transport of oxygen and nutrients, promotes their utilization by cells, enhances intracellular metabolism, stimulates cell regeneration and blood microcirculation.^{26,27} Hydrophilic layer (adhesive - tightly fixed to the oral mucosa, to the wound surface and isolated from the environment and preserved for 10 to 24 hours, preventing secondary infection of the wound, provides a therapeutic effect on the affected area for the entire period of treatment. Outer layer (hydrophobic)

prevents the release of film components into the oral cavity and the entry of oral fluid and microorganisms into the area of action of the film. The film is transparent and allows you to maintain oral hygiene for the entire period of treatment. The film is easy to use, patients can apply it independently under the supervision of a doctor.

The adhesive membrane “Diplen” has dissolving properties, since it contains food starch, cellulose, medical glue MK-1 and a medicinal ingredient, thereby simplifying its use.

Material and Methods

The clinical case presents the results of treatment and dental examination of a patient using the protective adhesive film “Diplen-S” in the complex therapy of chronic recurrent stomatitis (CRAS).

A 19-year-old patient came to the N1 University Dental Clinic of Yerevan State Medical University with complaints of pain and burning in the oral

mucosa, aggravated by eating, and the periodic appearance of painful ulcers, which disappeared on their own after 7-10 days.

Diagnostic methods included: clinical and laboratory methods, radiological methods, orthopantomography, assessment of periodontal and oral hygiene, general consultation with a doctor.

Exacerbations occur periodically 2-3 times a year. The cervical and occipital lymph nodes are enlarged and painful on palpation. Oral hygiene is unsatisfactory; there is an abundance of dental plaque, supra and subgingival dental deposits. The mucous membrane of the oral cavity is hyperemic and swollen, clearly defined ulcers (aphthae) are visible, up to 5 mm in diameter, covered with a grayish fibrous coating, surrounded by a reddish border, localized on the palate, lips and gums. In the area of the soft palate closer to the arch, where the aphthae were localized, a biological scab with purulent discharge is detected, as well as an unpleasant odor from the oral cavity (figures 1-5).

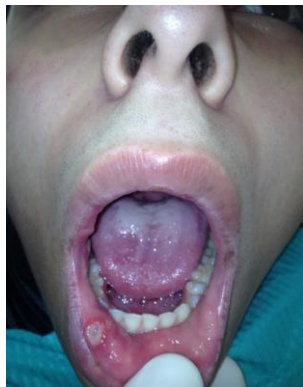
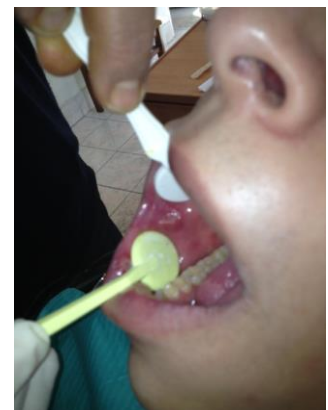


Figure 1, 2. Aphtha of the mucous membrane of a sharply limited, round shape



Figures 3, 4, 5. Multiple aphthae on the palatine arches of the oral mucosa covered with fibrous plaque, aphthae with a grayish-yellow coating

The collected medical history includes the presence of chronic constipation. In this regard, the patient was referred to a gastroenterologist, where dysbiosis of the gastrointestinal tract was diagnosed. Among the laboratory methods, a general blood test was performed (leukocytosis, neutrophilosis, eosinophilia, shift of the blood count to the left were determined); bacteriological examination of the oral cavity, after which the patient was diagnosed with oral dysbiosis, with an increase in the number of *Candida albicans* fungi, a decrease in the number of lactobacilli and the presence of yeast-like drusen.

Bacteriological research was carried out over time before and after treatment. A bacteriological study was carried out dynamically before and after treatment according to the Zinovieva-Kagramanova method, which consisted of the following: on an empty stomach, to obtain a native picture (brushing teeth, rinsing with liquids, eating food was excluded), a biopsy sample with sterile cotton balls from the affected surface and oral mucosa from various topographic zones was transferred into sterile tubes and transported in a portable refrigerator from BOMANN to a microbiological laboratory within 1-2 hours, where the microbial factor, sensitivity to antibiotics and fungal infections were determined. The study was carried out in the bacteriological laboratory of the Department of Epidemiology of Yerevan State Medical University. M. Heratsi and in the laboratories of the 1st clinical hospital in Yerevan.

The treatment was as follows: Due to pain and difficulty eating, rinsing with a 0.5-1% solution of novocaine, anesthesin with glycerin (in a weight ratio of 1 to 10), and aerosol spray Lidocaine 10% 5-10 minutes before meals were prescribed.

Sanitation of the oral cavity was carried out, which included the removal of supra and subgingival dental plaque, and also anesthesia of the aphthae was performed, the purpose of which was to eliminate pain in the patient, anesthetic ointment (1:10) was used, as well as aerosol spray Lidocaine 10%. After which the fibrous films were removed with the help of enzymes (trypsin, chymotrypsin). The most pronounced aphthae were covered with Diplen adhesive films for a period of 12 to 24 hours (see Materials and methods of treatment). For local therapy, the following were prescribed: oxygen therapy, a solution of antiseptic drugs (a solution of hydrogen peroxide 1% and

potassium permanganate 1:5000, as well as chlorhexidine 0.06%), epithelializing drugs (methyluracil ointment 5%, Metrogyl-Denta, and an oil solution of retinol. The patient was simultaneously directed to physiotherapeutic treatment, namely hyperbaric oxygenation, which increases cellular metabolism and regeneration. In parallel, general treatment was carried out: desensitizing therapy - Zaditen 0.001 g 1 t.3 times a day; to increase the ability of blood serum to inactivate free histamine histaglobulin 2 ml per / m² 2 times a week for a course of 10-12 injections; vitamin complex Pangexavit, vitamin B 12, for injections using the type of mandibular and torus anesthesia, effect on the microflora. For the effective treatment of oral dysbiosis, in addition to antifungal drugs and drugs with a targeted effect on the microflora, immunomodulators were included, in particular Imudon (15) (topically, 6 tablets per day until completely dissolved in the oral cavity, course - 20 days).

Conclusion

According to the results of this study, despite the limitations of the study the use of the adhesive membrane “Diplen-S”, which has therapeutic and protective properties with the possibility of including targeted drugs in its composition (taking into account the results of bacteriological research), largely leads to a reduction and disappearance of pain, accelerates the healing time and epithelization of aphthae, which gives us reason to recommend its use in the complex therapy of chronic recurrent aphthous stomatitis (RAS). The positive clinical results obtained, consisting in the absence of side effects and accelerated wound healing, are the basis for recommending the use of the Diplen adhesive film in the complex therapy and treatment of CRAS, as an innovative method in wide clinical practice.

Declarations

Conflict of interest and financial disclosure

The author declares that he has no conflict of interest and there was no external source of funding for the present study. None of the authors have any

relevant financial relationship(s) with a commercial interest.

Ethical approval

Research protocol was approved by the local Ethical Committee (2018/23) and in accordance with those of the World Medical Association and the Helsinki Declaration.

Informed consent

Informed consent was obtained from all individual participants included in the study.

Source of Funding

Non funding.

Availability of Data and Materials

Not applicable.

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«ԴԻՊԼԵՆ-Ս» ԱԳՀԵԶԻՎ ԹԱՎԱՆԹԻ ՕԳՏԱԳՈՐԾՈՒՄԸ ԿՐԿՆՎՈՂ ԱՖՏՈՉ ՍՏՈՄԱՏԻՏԻ ՀԱՄԱԼԻՐ ԹԵՐԱՊԻԱՅԻ ՄԵՋ (ԿԼԻՆԻԿԱԿԱՆ ԴԵՊՔ)

Լյուդմիլա Տատինցյան,¹ Լազար Եսայան,² Գոհար Գևորգյան,³ Տաթևիկ Բարսեղյան,⁴ Վալերի Տատինցյան⁵

- ¹ Մ. Հերացու անվան Երևանի պետական բժշկական համալսարանի թերապևտիկ ստոմատոլոգիայի ամբիոնի դոցենտ
- ² Պրոֆեսոր, Մ. Հերացու անվան Երևանի պետական բժշկական համալսարանի թերապևտիկ ստոմատոլոգիայի ամբիոնի վարիչ
- ³ Մ. Հերացու անվան Երևանի պետական բժշկական համալսարանի թերապևտիկ ստոմատոլոգիայի ամբիոնի դասախոս
- ⁴ Մ. Հերացու անվան Երևանի պետական բժշկական համալսարանի մանկական ստոմատոլոգիայի և օրթոդոնտիայի ամբիոնի դասախոս
- ⁵ Մ. Հերացու անվան Երևանի պետական բժշկական համալսարանի թերապևտիկ ստոմատոլոգիայի ամբիոնի պրոֆեսոր

Ամփոփում

Կրկնվող աֆտոզ ստոմատիտը բերանի լորձաթաղանթի տարածված խոցային հիվանդություն է: Այս պաթոլոգիայի էթիոպաթոգենեզում չկա մեկ հայեցակարգ, որը կներկայացնի տվյալներ մեխանիզմների մասին, որոնք որոշում են քրոնիկ կրկնվող աֆտոզ ստոմատիտը, մեկնաբանելով բերանի խոռոչում տարբեր կլինիկական նշանների դրսևորումը: Աշխատանքը ներկայացնում է հիվանդի բուժման և ստամնաբուժական հետազոտության արդյունքները՝ օգտագործելով «Diplen-S» ադհեզիվ թաղանթը քրոնիկական կրկնվող աֆտոզ ստոմատիտի համալիր թերապիայի ժամանակ:

«Դիպլեն-Ս» ադհեզիվ թաղանթի օգտագործումը հանգեցրեց ցավի նվազման և անհետացման, ապաքինման ժամանակի արագացման և քրոնիկական կրկնվող աֆտոզ ստոմատիտի աֆթայի էպիթելիզացման՝ առանց կողմնակի ազդեցությունների:

Եզրակացություն. Ստացված դրական կլինիկական արդյունքները (վերքերի ապաքինումը արագացնելը) հիմք են հանդիսանում «Դիպլեն» ադհեզիվ թաղանթի օգտագործումը ԱՍՀ-ի քրոնիկական կրկնվող աֆտոզ ստոմատիտի համալիր թերապիայի և բուժման մեջ ստոմատոլոգի պրակտիկայում:

ПРИМЕНЕНИЕ АДГЕЗИВНОЙ МЕМБРАНЫ «ДИПЛЕН-С» В КОМПЛЕКСНОЙ ТЕРАПИИ РЕЦИДИВИРУЮЩЕГО АФТОЗНОГО СТОМАТИТА (КЛИНИЧЕСКИЙ СЛУЧАЙ).

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Абстракт

Рецидивирующий афтозный стоматит (РАС) — распространенное язвенное заболевание слизистой оболочки полости рта. В этиопатогенезе данной патологии не существует единой концепции, которая бы излагала данные о пусковых механизмах, определяющих хронический рецидивирующий афтозный стоматит, трактуя констатацию проявления различных клинических признаков в полости рта. В работе представлены результаты лечения и стоматологического обследования пациента с использованием защитной адгезивной пленки «Диплен-С» в комплексной терапии хронического рецидивирующего стоматита (РАС).

Применение адгезивной пленки «Диплен-С» привело к снижению и исчезновению боли, ускорение сроков заживления и эпителизации афт без побочных эффектов.

Заключение: Полученные положительные клинические результаты, ускоряющие заживление ран, являются основанием для рекомендации использования адгезивной пленки «Диплен» в комплексной терапии и лечении РАС в практике стоматологии.