Case Report

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Management of recalcitrant ulcer in elderly patients with anemia: A case report

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Abstract

Objective: This case report aimed to answer challenging in the treatment of chronic recalcitrant ulcers in elderly complicated by anemic condition. A 68 years old female patient came to Hasanuddin University Dental Hospital with chief complaint of recalcitrant painful canker sores affecting mouth and throat.

Methods: Elder age could contribute in difficulty swallowing due to reduced saliva, slow eating habit, lost or caries teeth which lead to a less efficiency in the absorption of important nutrients such as iron and folic acid. This condition triggers a recalcitrant but chronic ulcer which in the end would add more difficulties for swallowing. A part from the pale conjunctiva of the eye, there was no other abnormality found extra orally. Drug therapy Bcom 150 mg with chlorhexidine gluconate 0.2% mouthwash and systemic corticosteroid.

Result: Blood screening results demonstrated lower hemoglobin level with 11.6 and hematocrit 35.6 with referred value of 12 and 37, respectively. Long visit was needed to slowly adapted patient oral environment with local condition, as well as from systemic background improvement Recalcitrant but chronic ulcers might be challenging in the treatment due to variabilities contributed factors such as age, unhealthy-eating habits, systemic background, and local oral hygiene and condition. One should be careful and be patient in changing the long behavior of the patient

Conclusion: Most importantly, patient been given advice to change her eating behaviors by consume more iron and folic acid food, and avoid irritant food. Local irritant of element 45 also been grinded.

Keywords: Anemia, Deficiency substance iron, Elderly, Folic acid deficiency, Reccurent Apthous Stomatitis (RAS).
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Introduction

Anemia is the most important health problem in the elderly. However, anemia should not be considered as an unavoidable consequence of aging. Anemia in the elderly indicates an underlying disease. Iron Deficiency Anemia is one of the main causes of anemia in the elderly, because in general the elderly are less efficient in absorbing some important nutrients, besides that, decreased appetite due to their illness, difficulty swallowing due to reduced saliva, slow eating due to disease in the teeth, reduced teeth and nausea due to depression problems, this causes iron deficiency in the body of the elderly.[1]

Numerous nutritional deficiencies, including those of vitamins B1, B2, B6 and B12, folate, iron, and ferritin are considered to be potential etiologies of Reccurent apthous stomatitis in addition to dysregulation of immunological function. Previous study revealed that folic acid, iron, hemoglobin (Hb) and vitamin B12 deficits are all present in 57 (20.9%), 55 (20.1%), 13 (4.8%), and 7 (2.6%) of 273 RAS patients, respectively.[2]

Recurrent aphthous stomatitis (RAS) is a common inflammatory condition with an unidentified cause. Numerous risk and predisposing factors have been linked to the development of RAS. The RAS process is multifaceted. The main risk factors for this condition are genetic predisposition, hematologic abnormalities, microbiological or immunologic factors, trauma, stress and hormonal status. According to studies, RAS has a variety of etiologies, including immunological dysfunction, infection, genetic susceptibility, malnutrition, mental stress and many concomitant diseases. According to epidemiological research, this illness affects between 5% and 25% of the general population.[3-5]

Up to 20% of RAS patients may have a nutritional shortage, and nutritional indicators linked to anemias (iron, serum ferritin) have been shown to be twice as common in RAS patients as in controls. Nolan et al., discovered that vitamin B1, B2, and/or B6 deficiency affected 28.2% of RAS patients. The study found those people might gain from receiving vitamin replacement therapy.[6]

Minor aphthous stomatitis (also known as Mikulicz's aphthea or mild aphthous ulcers), Major aphthous stomatitis (also known as MjRAS or periadenitis mucosanecrotica recurrence or Sutton's illness), and Herpetiform ulcers are three clinical manifestations of RAS. Minor RAS: Between 75 and 85 percent of RAS cases are of this type, making it the most prevalent. They normally range in size from 5 to 10 mm, last 10 to 14 days, and heal without leaving any scars. Major RAS: Their size is often greater than 10 mm. Herpetiform ulcers: These ulcers normally appear as clusters of several smaller than 5 mm ulcers that can combine to form larger confluent areas of ulceration, frequently accompanied by pronounced erythema.[7]

The hallmark of RAS, the most prevalent condition affecting the mouth, is recurring disruption of the oral mucosa in the form of painful ulcers. Small, round or ovoid, painful, self-healing, recurrent

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ulcers with demarcated borders, erythematous haloes, and yellow or gray floors are the clinical manifestations of RAS.[8,9]

RAS is known to be very painful. Ulceration This idiopathic is an oval lesion of different sizes with clean edges surrounded by an erythematous halo. In the center of the ulceration, fundus necrotic covered with yellow-white fibrinous exudate. Ulcers are usually present on the non-chewing mucosa of the cheeks, lips, ventral and lateral surfaces of the tongue, non-attached gingiva, and occasionally, the soft palate. RAS lesions are self-limited (simple aphthosis), resolving within 1-2 weeks in most patients. In those with the disease, ulcers can interfere with important daily functions, including nutrition, speech, and oral hygiene, and affect quality of life. This is important, 8 given that lesions can last >2 weeks, with recurrent episodes with in 1-4 months.[10,11]

Treatment of RAS is symptomatic, the prime goal being to relieve pain and enhance the healing process. Management of RAS by the usage of topical agents, systemic and topical steroids, cauterization, antibiotics, mouth rinses containing active enzymes, etc., but none of them have been proven to be efficacious.

Patients with anemia can reduced capacity of the blood to carry oxygen to oral mucosa, deficiencies of iron, vitamin B12, or folic acid may lead to anemia in RAS patients and resulting atrophy of oral mucosa.

Case Report

Female patient aged 68 years came to Hasanuddin University Dental Hospital part of Science Hospital with chief complaint of recalcitrant painful canker sores affecting mouth and throat. Ulcer repeated and some month this not visit get well. Patient complained of cancer sores on the mucosa of the right cheek, on the tip of the tongue and under the tongue. A month ago, she had treatment at the Public Health Center but there was no change, patient then treated again at the Public Health Center but the results were still the same and the canker sores still appeared. Previously given therapy was Mefenamic Acid, Arkavit-C, Oseltamivir Phosphate combined with tantum mouthwash verde and bufacomb ointment, after using these drugs there was a change but a few days later the canker sores appeared again with varying by a sore throat. Patient has entering menopause and worried with condition now because the thrush no visit get well. Patient own history use tooth artificial and inclined bad oral hygiene.

Extra oral examination includes: facial examination results appear symmetrical; lymph glands cervical, submandibular, and submental not palpable, no pain; The eyes showed anemic conjunctiva and there are no abnormalities on sclera. Intra-oral examination includes inspection cavity mouth and teeth. Intra-oral examination showed ulcers in the mucosa of the right cheek, under the tongue and the tip of the tongue with varying sizes, namely 2mm - 1cm, round, irregular with hyperemic edges and painful figure 1A and figure 1B. Tooth 22 and 44 missing, 37 and 46 amalgam filling, 45 superficial caries, and 36 silicate filling. The surface of the tongue has a white and yellowish pseudomembrane. Diagnosis requires supporting examinations that aim to determine the therapy to be given, namely by means of routine hematology/blood tests. The temporary diagnosis is RAS (Recurrent aphthous stomatitis).

At the first visit, pharmacological therapy was given with oral drug therapy BECOM-C 150mg with instructions 1/1 tablet per day for a week, a combination of chlorhexidine gluconate 0.2 % mouthwash which was used 3 times a day, every 5 ml of mouthwash was used to gargle for 30-60 seconds then discarded without rinsing, then the patient is instructed not to eat and drink for 30 minutes after gargling with this drug. Improved hygiene Oral cavity is also advised to the patient. Non-pharmacological therapy in the form of communication, information, and education is given to the patient's family to help the patient use the drug regularly and improve oral hygiene. The patient is expected to be under control next week and bring the results of routine blood tests.

Examination visit II (1 week/control I) complaints of pain in the oral cavity and throat are reduced, ulcer complaints have improved. A new complaint, namely the appearance of a new canker sore on the lateral right tongue measuring ±8mm round, regular and painful. Intraoral conditions at the second visit were shown in figure 2. Treatment was continued in the form of 150mg Bcom tablets and minocep mouthwash containing 0.2% Chlorhexidine gluconate for a week.

Hematological examination obtained from this patient, namely: the number of HGB below normal, namely 11.6 (g/dl) with (Normal value: 12-16) and HCT 35.3% (Normal value: 37-48%), may indicate an anemic condition. This situation describes the general condition of patients who are anemic as one of the triggers for recurrent

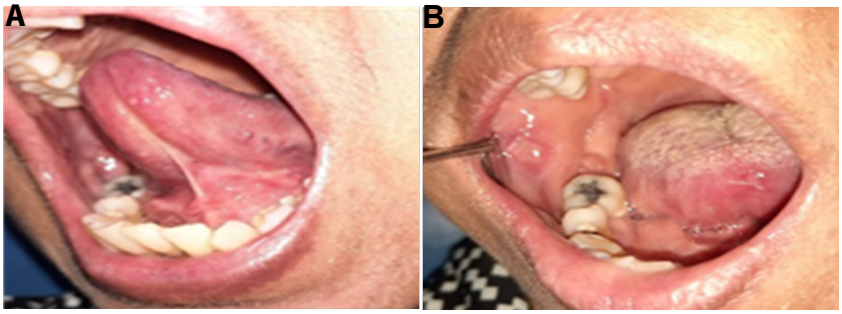

Figure 1. **A. An ulcer appears under the tongue, irregular with an erythematous border, B. An ulcer appears on the right cheek mucosa measuring >1 cm, irregular with an erythematous border, sore. (Source: personal documentation of visit 1).**

Figure 2. **After using albothyl on the ulcer on the lateral side of the tongue, there is a protrusion around the ulcer, the protrusion is painful, the size of the ulcer has not decreased significantly.**

Figure 3. **The ulcer is getting smaller and there is still a protrusion around the ulcer (Source: Personal documentation**.

Figure 4. **Multiple new ulcers measuring 2-3 mm, round, with hyperemic edges in the left cheek mucosa (Source: Personal documentation).**

canker sores. The association with general conditions that are not good plus the condition of patients who are elderly and have entered menopause requires special attention. Patients are educated to increase nutritious foods high in iron, folic acid, and adequate rest.

The third visit / control II (1 week) the ulcer on the mucosa of the right cheek has healed and is starting to be covered with new tissue, the ulcer on the lateral tongue is still there and still hurts. At this visit there was also a new ulcer measuring 2 mm under the tongue. Pharmacological therapy for vitamin Bcom drugs and chlorhexidine gluconate 0.2 % mouthwash was discontinued because it had been used for 2 weeks. For further therapy, triamcinolone acetonide (kenalog) was applied to ulcers on the lateral side of the tongue 3x a day after eating and instructed not to eat and drink for 30 minutes after application of this drug. Because there has been an improvement in the next visit, the patient is asked to come in the next 2 weeks. During these 2 weeks the patient was in the observation stage.

Visit to IV/Control III complaints of ulcers on the lateral tongue are still there, the size of the ulcer has not decreased, around the ulcer there is a protrusion that feels painful, and causes the patient difficulty eating, after being traced back it turns out that the patient uses policresulen (Albhotyl) to treat mouth sores, the patient gets advice to use this drug from friends. Instructions to patients at this visit were to stop using albothyl because it was suspected of causing inflammation/changes in the epithelium around the ulcer resulting in a painful protrusion, after being explained to the patient, the patient understood and was asked t o carry out the instructions and come back for control next week figure 2.

On a visit to V/Control IV, complaints of ulcers on the tongue were still there and still painful, at this visit the patient was not using albothyl. There is still an ulcer on the lateral side of the tongue with a slightly smaller size than last week, the patient still feels pain figure 3.

Examination of sharp teeth or teeth that have protruding and sharp cups is done by grinding. Grinding was done on tooth 45 to remove the protruding and sharp cups. The next instruction is to avoid hot, spicy, sour foods/drinks and those that use flavoring or preservatives in food. Check in next week to see the changes. The tofu drug is still being used.

Figure 5. The ulcer on the lateral tongue is well covered (Source: Personal documentation)

At the next visit the ulcer on the lateral side of the tongue was closed, the protrusion was still there and still hurt. At this visit he showed recovery, another complaint was the appearance of multiple new ulcers measuring 2-3 mm, round, with hyperemic edges in the lower labial mucosa and left cheek mucosa figure 4. To relieve the protrusion symptoms complained of by the patient, it was decided to give oral medication methylprednisolone 4 mg 2x a day for a week and was instructed to return for control next week.

Photos from the last visit showed improvement in the lateral tongue, the ulcer was well covered, the protrusion was still present but not painful overall, the patient was eating and drinking well and had no complaints figure 5.

The patient has been given an explanation regarding his illness, treatment plan, and the use of case documentation for writing this case report. The patient has also signed an informed consent as an agreement to these matters. Patients show a cooperative attitude during the treatment period, so that the results of therapy show significant improvement satisfying.

Discussion

Anemia is a condition where the amount of hemoglobin in the blood is less than normal. This substance is made in red blood cells, so Anemia can occur either because red blood cells contain too little hemoglobin or because the number of blood cells is not enough. Anemia is often found in the elderly and the increasing incidence of anemia associated with increasing age has led to speculation that decreased hemoglobin may be a consequence of increasing age. To find out if an elderly person has anemia, diagnostic laboratory tests for anemia are indeed very helpful. In this study I used a simple examination to diagnose anemia, several laboratory tests were carried out, namely checking Hb levels, Hematocrit values, Erythrocyte counts and erythrocyte index.

From the laboratory examination data, the results showed a below normal Hb level of 11.6 and an abnormal hematocrit value of 35.6. From research conducted by Hieronymus Rayi Prasetya et al, it is possible that anemia will occur in elderly patients due to decreased function of certain organs in the elderly body, especially in the digestive tract. The number of teeth in the elderly often decreases gradually and there is a decrease in saliva production, this makes it difficult for the elderly to digest food and will limit the types of food eaten. Food that enters the stomach with incomplete digestion can cause damage to the stomach, resulting in bleeding in the stomach, the longer the bleeding will become chronic, causing anemia. In addition, decreased function of the digestive tract can cause reduced absorption of important nutrients from food such as iron, vitamin B12, calcium, fatty acids folate.

The oral cavity reflects the health of a person's body because it is the first entry point for food ingredients for optimal growth and health needs. Various kinds of lesions often occur in the oral cavity which can be caused by various factors, one of which is aphtosa stomatitis recurrences. The etiology of RAS is not known with certainty, but there are several predisposing factors that can initiate RAS, namely genetics, trauma, food allergies, hormones (during the menstrual cycle), stress and anxiety, smoking habits, chemical products, microbial infections and nutritional deficiencies.

Along with increasing age, there are changes in the human body that are degenerative in nature (decreased function), decreased function in the digestive tract causes reduced absorption of important nutrients from food, especially iron. Changes in the body of the elderly that are irreversible (cannot return to normal) cause damage to the bone marrow resulting in a decrease in the production of erythrocyte cells causing a deficiency of hemoglobin in the body of the elderly resulting in anemia.

Handling the patients in this case reports requires slightly different attention with the younger patients because the complexity of factors owned by elderly patients. They are more susceptible to oral conditions due to age-related systemic diseases, functional changes, pharmacotherapy, and cognitive impairment. Aging can

cause physiological changes in oral cavity. During the aging process, oral mucosa loses much of its efficacy, getting predisposed to oral lesions. Elderly mostly related with some systemic condition due to their physiological changes, an several systemic factors not only influences the patient's ability to maintain oral hygiene and promote the oral health, but also can be related to the occurrence of certain oral diseases or condition and among those are the intake of drugs. Though impairments are not life threatening, they affect a person's quality of life.

Conclusion

Risk factors for RAS in elderly patients are systemic conditions such as anemia, poor oral hygiene, decreased appetite due to illness, difficulty swallowing due to reduced salivation, slow eating due to dental disease, reduced teeth and nausea due to depression, this causes iron deficiency in the body of the elderly which can manifest as RAS. Recalcitrant but chronic ulcers might be challenging in the treatment due to variabilities contributed factors such as age, unhealthy-eating habits, systemic background, and local oral hygiene and condition. One should be careful and be patient in changing the long behavior of the patient.

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Conflict of Interest

The autros report no conflict of interest.

References

1. Yu-Hsueh Wu, Julia YC, Yi-Ping W. Anemia and hematinic deficiencies in anti-gastric parietal cell antibody-positive and negative recurrent aphthous stomatitis patients with anti-thyroid antibody positivity. J Formos Med Assoc 2017;116: 145-152.
2. Ghalayani P, Zolfaghary B, Farhad AR. The efficacy of punica granatum extract in the management of recurrent aphthous stomatitis. J Res Pharm Pract 2013;2: 88-92.
3. Lin KC, Tsai LL, Chengchuan E. Comorbidity profiles among patients with recurrent aphthous stomatitis: A case control study. J Formos Med Assoc 2019;118: 664-670.
4. Puri N, Gill JK, Kaur H. Recurrent aphthous stomatitis: Therapeutic management from topicals to systemics. J Adv Med Dent Sci Res 2015; 3: 165-170.
5. Tarakji B, Gazal G, Al-Mawer SA. Guideline for the diagnosis and treatment of recurrent aphthous stomatitis for dental practitioner. J Int Oral Health 2015;7: 74-80.
6. Kumar AM, Ananthakrishnan V, Goturu J. etiology and pathophysiology of recurrent aphthous stomatitis: A review. Int J Cur Res Rev 2014;6: 21.
7. Edgar NR, Saleh D, Miller RA. Recurrent aphthous stomatitis: A review. J Clin Aesthetic Dermatol 2017;10: 26-36.
8. Han M, Fang H, Li QL, et al. Effectiveness of laser therapy in the management of recurrent aphthous stomatitis: A systematic review. Sci Rep 2017;7: 41955.
9. Chiang CP, Chang JYF, Wang YP, et al. Recurrent aphthous stomatitis - Etiology, serum autoantibodies, anemia, hematinic deficiencies, and management. J Formos Med Assoc 2019;118: 1279-1289.
10. Babu B, Uppada UK, Tarakj B. Versatility of diode lasers in low-level laser therapy for the management of recurrent aphthous stomatitis. J Orofac Sci 2015;7: 49-53.
11. Nur'aeny. Challenges in the management of oral ulceration in elderly patients. Dent J 2015;48: 165-169.