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Case Report

Challenges in the management of oral ulceration in elderly patients

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ABSTRACT

Background: *Oral ulceration can be experienced by anyone, including those who are elderly. Various trigger factors can occur in elderly patient, but the main thing to consider is the degenerative factors that affect the occurrence of some medical problems. Handling oral ulceration in elderly patients should be done carefully and holistically otherwise the improvement is only temporary and can reappear or even be worse.* ***Purpose:*** *In this paper we will discuss two different case reports of elderly female patients and both having some oral ulceration.* ***Cases:*** *First case of recurrent oral ulceration experienced by 58 years old patient, and second case is concerning a 77 years old patient with chronic oral ulceration and also having some medical problems. Aphthous like ulcers (ALU) is a diagnosis for recurrent oral ulceration associated with systemic condition, and usually started after adolescent age. Elderly or geriatric condition itself is a special condition that contribute to the degree of a disease.* ***Cases management:*** *Both patients given non pharmacology and pharmacology therapies. The non pharmacology therapy includes communication, information, and education, also oral hygiene instruction. Steroid as anti-inflammatory drugs had an important role in healing process, beside other medication.* ***Conclusion:*** *Oral ulceration in elderly patients with or without a medical problems becomes a challenging thing to handle due to the complexity of their condition. As a dentist we have more careful to arrange the treatment plans for elderly patients when combine with some therapy related systemic disease.*

Keywords: *ulceration; oral mucosa; elderly*

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INTRODUCTION

Oral ulceration can be experienced by anyone, it does not depend on age or gender. Various trigger factors such as trauma due to bitting, or exposed to something sharp, food allergies, or microorganism infection often associated with the emergence of acute, chronic, or recurrent oral ulceration.[1,2] The history of medical problems such as diabetes mellitus, hypertension, or others that suffered by patients who have oral ulceration should also be noted because it could be interrelated or even aggravate the condition of oral ulceration.

Age classification varied between countries and over time, but as far back as 1875, in Britain, The Friendly Societies Act, defined the term old age as any age after 50. Nowadays, in most developed world countries, the chronological age of 65 years as a definition of elderly or older person, but the United Nation agreed begin 60 years to refer to the older population.[3] After reaching the age of 40 years, people experience a progressive decline in homeostatic control and in the ability to respond to stress and change.[4] In this paper we will discuss two case reports of elderly female patients who had oral ulceration. First case of recurrent oral ulceration experienced by 58 years old female patient and second case is concerning a 77 years old female patient with chronic oral ulceration. Diagnosis at first upheld based on history and clinical examination, but further investigation will be plan, including blood testing. Treatment plans was given to both patients includes non-pharmacological and pharmacological therapies.

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CASES

Patient 1: a married woman, 58 years old, came with complaints of pain in her mouth since a year ago. Patient had oral ulcer since came back from Saudi Arabia for umrah. She aware that the ulceration disappear and arise with tightly frequency. On average each ulcer occurs within 2 weeks, and then followed by a new ulcer. Ulceration usually occur on the tongue, both labial mucosa, and both buccal mucosa which caused swollen. This time she complaint pain of the right side inner cheek and tongue. Patient had seek treatment to many doctors and dentists, but complaints still occur. She did not know what caused the complaints, but she realized that there were somethings disturb her minds. Patient feel desperate to face this condition.

There is no abnormalities on extraoral examination, and the intraoral examination showed there are some ulcers in the right buccal mucosa. Clinically there are 3 ovoid ulcers, approximately 3 mm of diameter, with yellowish in center and erythema in the border, the right buccal mucosa also look swollen. On the dorsum of tongue there are thick white layer (Figure 1). According to World Health Organization system of tooth nomenclature, the dental status in this patient showed some missing teeth in 37, 36, 45, 46 tooth region, and some dental caries found in 16, 17, and 47 tooth region, but no dental fillings was found. Almost all tooth region covered with stain, plaque, and calculus. Working

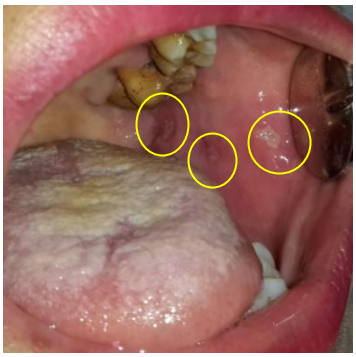

Figure 1. The initial condition. (Personal documentation)

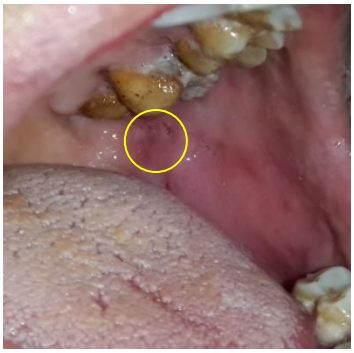

Figure 2. Oral conditions in 1 month later (ulcers healed). (Personal documentation)

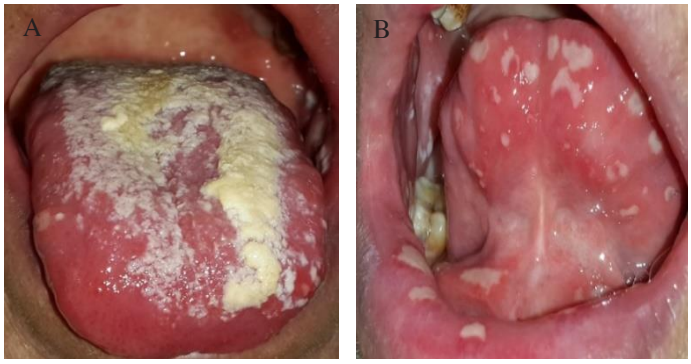

Figure 3. Patient came with more severe condition. a) coated tongue, b) ulcer spread on oral mucosa. (Personal documentation)

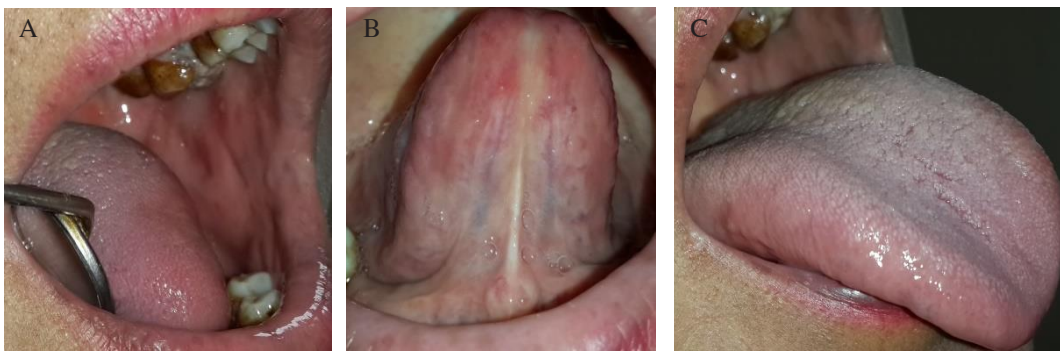

Figure 4. Condition of patient after 1 month, a) ulcer on left buccal mucosa, b) ulcer on dorsum of the tongue, c) ulcer on ventral of the tongue. (Personal documentation)

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diagnosis for the oral lesion was made as suspected aphtous like ulcers (ALU) for the ulcers in right buccal mucosa and suspected as acute pseudomembranous candidiasis for the tongue lesion. Patient is advised to get back in 1 week, but she get back after 1 month. The ulcers healed, but she complaint of soreness on the tongue while brushing (Figure 2).

At this second visit, patient brought the result for the laboratory test. There were RBC 12,4 g/dL, WBC 8.500/mm^3, PCV 39%, Pplatelet 391.000/mm^3, ESR 100 mm/h, basophil 0, eosinophil 1, neutrophil stab 3, neutrophil segmented 64 lymphocyte 28, monocyte 4. On the next visit (3rd visit), patient cannot comes within suggested time, because she has a problem due to a long distance between the residence and hospital. Patient came with more severe condition than the earlier one. After she did not take any medicines, the complaint reappeared (Figure 3). Patient aware that the oral condition become severe triggered by the food, she was eating salt fish, although it has been advised since the beginning to not consume foods that contain preservatives. Latest condition after 1 month later (6th visit), patient showed significant improvement (Figure 4).

Patient 2: a woman, 77 years old, came with complaint of pain on the edge of the tongue that has suffered since 2 months ago. Patients have been treated on several general practitioners and also specialists in internal medicine, but still not healed. Patient said that she had a history of heart disease, hypertension, and diabetes mellitus. She is still taking medicines related to her condition until now. Extraoral examination did not found any abnormalities. Intraoral examination showed the dental status according WHO system, for entire teeth in the upper jaw and lower left were residual roots, and patient has weared dentures in the upper jaw. In 46 and 47 tooth region there are missing teeth. Some dental filling are found in 26 and 48 tooth region. The oral lesion occurred as an ulcer, size approximately 1 cm on ventrolateral of the tongue or at 36 and 37 tooth region, ulcer surrounded by white areas, and indurated margin (Figure 5). Diagnosis was made as suspected traumatic ulcer due to residual roots of 36 and 37. After one week (2nd visit), patient came and showed good improvement, less indurated of the margin, and less pain. (Figure 6A). A week later (3rd visit), also found more good improvement, the lesion

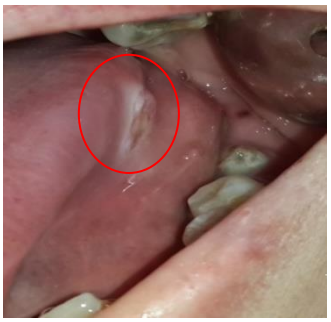

Figure 5. Indurated ulcer on ventrolateral of the tongue. (Personal documentation)

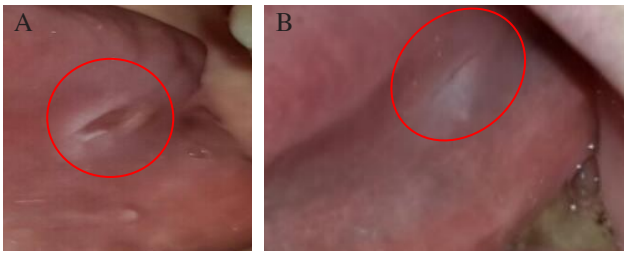

Figure 6. Healing ulcer after a) 1 week, and b) two weeks of treatment. (Personal documentation)

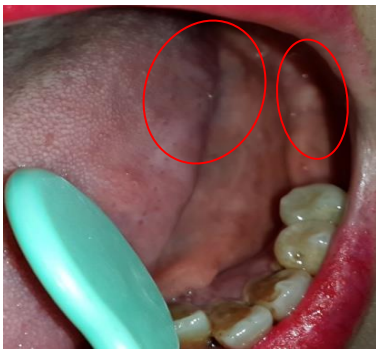

Figure 7. Ulcer healed perfectly after tooth extraction (36 and 37). (Personal Documentation)

was getting smaller, clinically appear as fissure (Figure 6B). At this time, patient was still not dare to undergo any tooth extractions (36 and 37 teeth region), which has been recommended, but finally after she get more explanation about the possibility to recurrent the same oral ulceration, patient has willingness to get her tooth extraction. At 4th visit, the healing process became faster and the lesions were healed perfectly after eliminate the factors that cause trauma on the tongue (Figure 7).

CASES MANAGEMENT

Patient 1: patient was given non-pharmacological and pharmacological therapy. Non-pharmacological therapies include communication, information, and education for the patient to avoid foods that were spicy, hot, contain preservatives, and suggestion to increase the consumption of water, fruits and vegetables. She was also received the oral hygiene instruction (OHI) consist of tooth brushing method and the technique of scrapping the tongue. Pharmacological therapy at the initial visit include prescribing triamcinolone acetonide paste in ora base given topically, chlorhexidine mouthwash, multivitamins, folic acid, vitamin B12 administered orally. Patient also asked to do the routine hematology test. Then in second visit, patient was given prescribing of antifungal, which was nystatin oral suspension 4 times 1 ml a day, chlorhexidine mouthwash, immunomodulator, multivitamin, and suggestion to consume substitution foods. In 3rd visit, additional non pharmacology therapy was suggestion to avoid toothpaste

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that contain detergent. For medication, patient was added prednisone for rinsed and swallowed twice a day, each time 2 tablets were dissolved within 4 spoons of water. Other drugs were still continued. In next visit (4th visit), patient suggested to stop prednisone and anti fungal, but still advised to continue the consumption of multivitamins, folic acid, vitamin B12, and the use of antiseptic, chlorhexidine daily at the same dose with previous. At the 5th visit, there were two small ulcers reappeared, so patient re-advised to use the topical triamcinolone to be applied into ulcers three times a day, and other medications were still continued. At the last visit, patient showed good improvement, but the patient still advised to consume the multivitamins, and folic acid to maintain the immune system, and to do all things as the non pharmacology therapy throughout her life.

Patient 2: non pharmacology therapy was as the same as patient 1, but the pharmacology therapies are quite different. This patient was given prednisone orally since the first visit, with the doses for three tablets (15 mg) in the morning and three tablets (15 mg) in the afternoon for a week. Patient was also advised to applied triamcinolone acetonide paste in orabase to the lesion three times a day, after used antiseptic rinsed three times a day, and given multivitamin one tablet a day. For the next treatment at 2nd visit, patient was given tappered dose of prednisone tablet for two tablets (10 mg) in the morning and two tablets (10 mg) in the afternoon for a week, others drugs were still continued. Patient was also suggested to have tooth extraction in 36 and 37 teeth region. At the 3rd visit, the condition was improved, prednisone dose was tappered into one tablet (5 mg) in the morning and one tablet (5 mg) in the afternoon for a week, others drugs were still continued, until the 4th visit, except the dose of prednisone which was planned to be stop, one tablet (5 mg) as alternate dose for a week.

DISCUSSION

Aging can cause physiological changes in oral cavity.[5] 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 actually be related to the occurrence of certain oral diseases or condition and among those are the intake of drugs.[6,7] Though impairments are not life threatening, they affect a person's quality of life.[7]

Handling both 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.[8,9] In patient 1, a 58 years old woman, the recurrent ulceration was diagnosed as an aphthous like ulcer (ALU), due to many suspected causes factors such as food preservative, microorganism, and emotional stress. The frequency of ulceration is quite often after she came back from umrah a year ago, this can be as a trigger factor to decreased the immune system due to her exhausted condition and different weather. She also said that she often had emotional stress due to some problems from the job and families . Psychological factors may be an important factor as some patients notice that their ulcers become worse in periods of illness, stress or extreme fatigue. Some form of stress management counselling might be considered in some of these cases.[2] This condition was diagnosed more as ALU than other similar clinical feature which was recurrent aphthous stomatitis (RAS), due to late occured (above 40 years old), and related with systemic condition.

The blood test showed normal values except for the increased ESR value. ESR stands for erythrocyte sedimentation rate that indirectly measures how much inflammation is in the body and is used often as a nonspecific measure in monitoring disease activity.[10] Patient did not have any complaints in other parts of body, so the increased level of ESR was assumed due to the oral inflammation, clinically as oral ulceration and suspected oral candidiasis.

Oral candidiasis occured in this patient related to more decreased of immune system due to lack of nutrition, especially as protein-energy malnutrition that often happened in elderly patient. Malnutrition may in turn lead to poor tissue healing and predispose to ill-health.[11] This patient given suggestion to consume a subtitution food contains high protein, such as Peptisol® / Ensure® to raised an adequate immune system. A compromised nutritional status, in turn can further undermine the integrity of the oral cavity are closely interrelated, diet and nutrition should be considered as an integral part of the oral health assessment and management of the elderly.[7] Multivitamins and immunomodulator given in this patient also increased the immune system because in the recurrent ulceration often occur hematologic deficiency including serum iron, folic acid, or vitamin B12.[12] Vitamin B12 can influence the production of RBC so the blood supply can be support by the consumption this supplement.

Patient complaints pain when scrapped with tongue scrapper, this was said when patient came at 2nd visit. The sign and symptom of oral candidiasis appeared as creamy, white plaques on the tongue and when scrapped, it leaved a red, painful ulcerated surface exposed.[6] Began at the 2nd month of therapies, patient taking Nystatin as anti fungal with 1 ml dose 4 times a day for a week. Nystatin is one of fungal polyenes and used as the first line antifungal agent for oral candidiasis without systemic *Candida* infections.[13] Patient was also suggested to scrapped tongue gently to desquamated the layer of debris, and also to create hygiene environment of the oral mucosa. This activities of maintaining oral hygiene includes teeth brushing twice a day and scrapping the tongue can improve the oral health. After healed from the oral candidiasis patient then

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suggested to rinsed often with chlorhexidine gluconate 0.2% as an antiseptic mouthwash 2-3 times daily after teeth brushing. Patient was very pleasant with her condition after rinsed with this medicine, and sometimes she increased the schedule of rinsed because she feel comfotable after used it.

A decline in protective barrier function of the oral mucosa could expose the aging host to myriads of pathogens and chemicals that enter the oral cavity during daily activities.[7] During the treatment she got two times recurrency of ulceration triggered by food includes its ingredients and preservatives, such as salt fish, coconut milk, and spicy food. This condition maybe related to hypersensitivity reaction of food after contact to oral mucosa. From the first time of therapy, patient often did not follow the instruction, she still consume various kind of food that could trigger oral ulceration, and the patient is not disciplined in following the treatment schedule, so often withdrawal eventually led to reappeared the ulceration.

Patient 2 is a woman, 77 years old who have traumatic lesion on lateral of tongue due to friction from the sharp part of residual teeth. Thinner and smooth oral mucosa and also a decreased rate of wound healing often found with age.[7] This condition made oral mucosa is more fragile when exposed to something sharp and in this patient was occured as a chronic ulcerative lesion. This patient also has history of mild hypertension, cardiovascular disease and diabetes mellitus. According to her age it was concluded that her immune system was not as good as her immune system when she was younger. This medical problems didn't involve with oral lesion. No oral complication have been associated with the hypertension itself.[4] Diabetic condition often associated with dry mouth and poor wound healing,[4] although this patient didn't complaint of dry mouth, but this condition may aggravate the friction into the oral mucosa. Patients also experienced some hard times after her husband passed away a few months ago. Patient was given steroid systemic as the adequat drugs to help decreased the inflammatory reaction, beside that patient also referred to oral surgeon to have teeth extracted as the causes of the ulcerative due to her medical problems. Non pharmacology therapy also play important role in healing process, and this patient have a good compliance to follow the therapy.

In conclusion, oral ulceration in elderly patients with or without a medical problems becomes a challenging thing to handle due to the complexity of their condition. As a dentist we have more careful to arrange the treatment plans for elderly patients when combine with some related systemic disease therapy.

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