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EXFOLIATIVE CHEILITIS
 (Case report)

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ABSTRACT

Background : Exfoliative Cheilitis is defined as a chronic inflammatory disorder of the vermillion border of the lips, which is characterized by the persistent formation of scales and crusts. Underlying stress or psychiatric conditions may cause or exacerbate exfoliative cheilitis. **Purpose :** This paper reports the mechanism of stress as the predisposing factor of exfoliative cheilitis. **Case :** The patient had been suffering the desquamation, dryness, and tenderness of lips for three months. The disease was not treated by any drugs. She consumed the multivitamin then ate more fruits and vegetables, but it was not getting well. **Case Management :** The anamnesis results that she had an allergy of some foods and never got serious diseases. There was story of biting and picking of lips, when she was getting stress. She was referred by oral medicine specialist to get the complete blood count and Ig E test, but all of the results were normal. The final diagnosis was Exfoliative cheilitis, and the differential diagnosis was Allergic Stomatitis. She was prescribed triamcinolone acetonide 0,1% topically on her lips for three times until seven days. The instruction to patient were drinking much water and avoiding her habit of biting and picking of lips. **Conclusion :** Severe stress will trigger more proinflammation cytokines to increase epidermal growth factor (EGF) of oral mucous, so that caused unremitting desquamation.

Keywords : Corticosteroid, exfoliative cheilitis, mechanism

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INTRODUCTION

Cheilitis is a general term that refers to an inflammation of the vermillion border of the lips. Cheilitis is classified into various types: angular cheilitis, actinic cheilitis, contact cheilitis, plasma cell cheilitis, cheilitis glandularis, cheilitis granulomatosa, exfoliative cheilitis and factitious cheilitis. Lip lesions can be manifestations of systemic diseases, a localized expression of dermatologic diseases or a localized condition of the lips. In most cases, a good history, thorough clinical examination and relevant investigations will help the clinician arrive at a diagnosis.¹

Exfoliative Cheilitis is defined as a chronic inflammatory disorder of the vermillion border of the lips, which is characterized by the

persistent formation of scales and crusts. Exfoliative cheilitis is a rare disease.² It is characterized by unremitting production and desquamation of thick scales of keratin.³

Crusts may be attributed to self induced trauma such as repetitive biting, picking or licking of the lips. Underlying stress or psychiatric conditions may cause or exacerbate exfoliative cheilitis which regress with psychotherapy and anxiolytic-antidepressant treatment. This condition is disabling as it causes cosmetic disfigurement and also affects daily activities such as chewing and speaking.³ Symptoms of Exfoliative cheilitis are tenderness and burning lips with different intensities. Patients may avoid participation in society due to inappropriate appearance of lips.⁴

The cause of Exfoliative cheilitis is still unknown. There is no effective therapeutic intervention for it. Numerous treatments with variable efficacy rates were suggested for the management of Exfoliative cheilitis. Topical treatments include antibacterial and antifungal ointment, corticosteroid ointment, sunscreen, petroleum jelly, herbal product, urea 20% ointment, tacrolimus ointment, salicylic acid ointment and cryotherapy systemic treatments consist of corticosteroids, antifungal and antidepressants.⁵

This paper reports the mechanism of stress as the predisposing factor of exfoliative cheilitis. She had been suffering this disease for three months. The differential diagnosis was an allergic stomatitis, because she had the allergy history.

CASE

Woman, 22 years old, the student of dentistry faculty. It was the first year for her to handle the patient as a dentist resident. She had been suffering the desquamation, dryness, and tenderness of lips for three months. The disease was not treated by any drugs. She consumed the multivitamin then ate more fruits and vegetables, but it was not getting well. This disease was really disturbing her.

CASE REVIEW

1st Visit (1 day)

The anamnesis results that she had an allergy of some foods and never got serious diseases. There was story of biting and picking of lips. Sometimes she was doing it when she was getting stress. She felt more stressful since she had been accepted in Dentistry faculty four months ago. The extraoral examination showed the peel, dry, desquamative, erosion, dan red lips. The intraoral examination showed the normal condition and good oral hygiene. Because of the allergy history, the oral medicine asked her to get the complete blood count and Ig E test. This disease was suspected the allergic stomatitis. The differential diagnosis was Exfoliative cheilitis. She was prescribed an antiseptic gel contains the aloe vera extract. It was used topically on her lips for three times a day. She was asked to control it after she got the results of her blood test.



Figure 1. It showed the peel, dry, desquamative, erosion, red, and burning lips

2nd Visit (7 days)

The patient came to the oral medicine with the normal blood test. She used the topical drug regularly. The extraoral examination showed the little desquamative, and erosion lips, but the tenderness of lips was gone. The intraoral examination showed normal and good oral hygiene. It means that the patient was not allergy. The final diagnosis was Exfoliative cheilitis. She was prescribed the topical corticosteroid contains triamcinolone acetonide 0,1%. It was used topically on her lips for three times until seven days. The instruction was drinking much water and avoiding her habit of biting and picking of lips. She was asked to control it after seven days.



Figure 2. It showed the little desquamative, and erosion lips, but the tenderness of lips was gone.

3rd Visit (14 days)

The patient came to control her disease. She used the topical drug regularly. The extraoral examination showed normal including her lips. The intraoral examination showed normal and good oral hygiene. The therapy was finished, because she had been cured. She was still instructed for drinking much water and avoiding her habit of biting and picking of lips, then giving her the advice to handle her stress and having relax time.

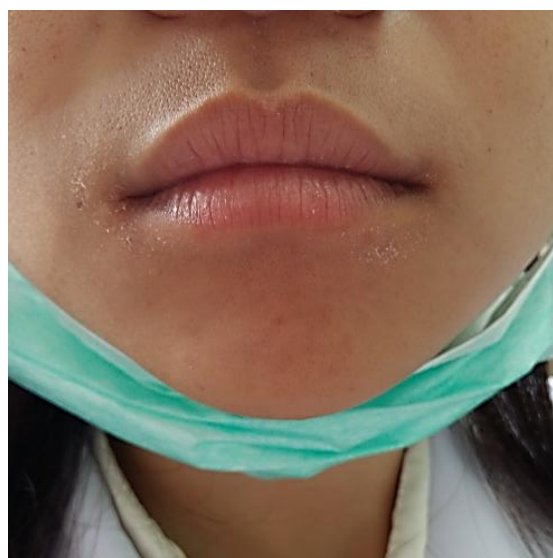


Figure 3. The normal condition without desquamation lips.

DISCUSSION

This case shows that stress could be the trigger of Exfoliative cheilitis. Stress can be divided as biological stress, physical stress, mechanical stress, and psychological stress. Stimulus stress will be accepted in the limbic system. the central nervous system as stress perception, there are neurochemical changes in brain waves that are transmitted to the hypothalamus. This will start the stress responses in the form of the release of corticotropin hormone (corticotrin releasing hormone / CRH) through the paraventricular nucleus will stimulate the anterior pituitary gland to release adrenocorticotropin hormone (ACTH). The end result of this process will enable the adrenal cortex to produce cortisol. The function of cortisol are mediators of immunosuppressant and anti – inflammatory effect. This is called the hypothalamic - pituitaryadrenal (HPA). At the same time the stress response also activates simpatethetic - Adreno medullary axis (SAM) that will release norepinephrine from the adrenal medulla. Cortisol and norepinephrine as a major stress hormone. This would cause a disruption of the balance of Th1 and Th2 with different clinical effects.^{6,7}

norepinephrin and also cortisol level. Both of these stress hormones will maintain the homeostasis of the body to keep the balance of Th1 / Th2 . Adrenergic receptors on the surface of helper T cells is important for regulating Th1 / Th2 cells, but the failure of the HPA axis to response stress can decrease synthesis of cortisol.^{8,9} Psychological stress will increase the synthesis of norepinephrine, then Th cells will subsequently move towards Th1 cells.⁷

Norepinephrine also can increase the production of interleukin - 12 (IL - 12)that Th1 cells stimulated beta-adrenergic receptors on the surface. Then it produce IFN - γ as a pro - inflammatory cytokine that plays an important role for increasing epidermal growth factor (EGF) and nerve growth factor (NGF). Both of cytokines are important in keratinocyte proliferation or autoimmune reactions. This mechanism looks like the psoriasis disease.^{7,10} Stress will trigger proinflammation cytokines to increase epidermal growth factor (EGF) of oral mucous. Severe stres will make over expression of EGF that caused Exfoliative cheilitis.

This case was treated by triamnicolone acetonide 0,1%. This drug is given before induction phase, is formed in the immune response of the body before antigen stimulation happened. The immunosuppressant effects of corticosteroid can be

reached it through inhibiting fagocytosis and antigen process to be immunogenic antigen by macrophage, inhibit antigen introduction by immunocompetent lymphoid cell, and destroy immunocompetent lymphoid cell.^{11,12} Corticosteroid avoids the over expression of inflammatory cytokines in Exfoliative cheilitis. The epithel cells of oral mucous would stop unremitting production and desquamation of thick scales of keratin. It can be concluded this case shows stress as the predisposing factor of Exfoliative cheilitis. Severe stress will trigger more proinflammation cytokines to increase epidermal growth factor (EGF) of oral mucous, so that caused unremitting desquamation.

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