

The Differences Between Exfoliative Cheilitis and Factitial Cheilitis, Also Its Association with B12 Deficiency: A Review Article

Gofur NRP^{1*}, Gofur ARP², Soesilaningtyas³, Gofur RNRP⁴, Kahdina M⁴ and Putri HM⁴

¹Department of Health, Faculty of Vocational Studies, Universitas Airlangga, Surabaya, Indonesia

²Faculty of Dental Medicine, Universitas Airlangga, Surabaya, Indonesia

³Department of Dental Nursing, Poltekkes Kemenkes, Surabaya, Indonesia

⁴Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

*Corresponding author:

Nanda Rachmad Putra Gofur,
Department of Health, Faculty of Vocational Studies,
Universitas Airlangga,
Surabaya, Indonesia,
E-mail: nanda.rachmad.gofur@vokasi.unair.ac.id

Received: 19 Nov 2020

Accepted: 12 Dec 2020

Published: 15 Dec 2020

Copyright:

©2020 Gofur NRP et al., This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and build upon your work non-commercially.

Citation:

Gofur NRP . The Differences Between Exfoliative Cheilitis and Factitial Cheilitis, Also Its Association with B12 Deficiency: A Review Article. *Annals of Clinical and Medical Case Reports*. 2020; V5(5): 1-3.

Keywords:

Cheilitis; Exfoliative cheilitis; Factitial cheilitis; B12 deficiency

1. Abstract

1.1. Background: Cheilitis is generally an inflammation that occurs in the vermilion border of the lips. Exfoliative Cheilitis is a chronic disease that occurs locally only on the vermilion border of the lips, which until now the exact cause has not been identified. Exfoliative cheilitis often has clinical symptoms similar to other diseases, one of which is Factitial Cheilitis. Factitial Cheilitis often occurs in adolescent to adult women.

1.2. Objectives: Difference Exfoliative cheilitis and Factitial Cheilitis, also its association with B12 deficiency.

1.3. Discussion: Clinical symptoms of exfoliative cheilitis are often the same as factual cheilitis, however trigger factors such as recent psychosocial stressors are temporarily linked to the emergence of self-injurious behavior which is one of the factors causing factual cheilitis. In contrast, exfoliative cheilitis did not show a gender predisposition. Micronutrient factors deficiencies that have been associated with cheilitis leading to anaemia are iron, folate, vitamin B12, vitamin A, and zinc. Folate and vitamin B12 are essential for cellular proliferation and erythropoiesis, and their deficiency can depress cellmediated immunity.

1.4. Conclusion: factitial cheilitis is a chronic condition characterized by hardening of the skin, hyperkeratosis, and ulceration

that befell the patient as a result of self-injurious. In contrast to exfoliative cheilitis was contact (allergic and irritant), and nutrition factors Deficiency B12 have been associated with cheilitis.

2. Introduction

Cheilitis is a term describing lip inflammation of various etiologies, which occurs relatively often. The disease may appear as an isolated condition or as part of certain systemic diseases or conditions. It may be part of a clinical picture or an accompanying condition. Cheilitis can co-occur with many conditions including anemia, oral candidiasis, atopy, contact reaction to an irritant or allergen (e.g., to cosmetics), drug intake (e.g., retinoids) [1, 2].

Cheilitis is generally an inflammation that occurs on the vermilion border of the lips. Exfoliative Cheilitis is a chronic disease that occurs locally only on the vermilion border of the lips, which until now the exact cause has not been identified[3, 4].

Exfoliative cheilitis often has clinical symptoms similar to other diseases, one of which is Factitial Cheilitis. Factitial Cheilitis often occurs in adolescent to adult women. Many factors are closely related to the disease, such as psychological factors and stress. People who experience Factitial Cheilitis are often found to have psychological disorders, excessive anxiety or psychosocial stress. Some of these factors can cause difficulty smiling, speaking, and

discomfort while eating [5, 6].

Oral mucosal changes including cheilitis lesions represent a cardinal symptom of vitamin B12 deficiency and may represent the earliest clinical sign of B12 deficiency, as in our patient. The literature includes few studies that evaluated the effect of deficiency vitamin B12, could resulting cheilitis [7, 8].

Objectives Difference Exfoliative cheilitis and Factitial Cheilitis, also its association with B12 deficiency.

3. Discussion

3.1. Difference of Factitial Cheilitis and Exfoliative Cheilitis

Factitial cheilitis is a rare condition characterized by cyclic and persistent exfoliation of excess keratin due to behaviors such as persistent licking, sucking, biting, and tearing of the lips. Apart from excess keratin, the symptoms that often appear are dry and scaly lips which can cause crusting, cracking, and bleeding due to the cyclical nature of the self-injurious behaviour. Pain and difficulty smiling, talking, or eating can occur in severe cases. Other significant issues include aesthetic issues contributing to initial sustained behaviour. Some cases of factual cheilitis can be found as exfoliative cheilitis [9, 10].

Exfoliative cheilitis had clinical manifestation of lip inflammation, constant desquamation, sometimes just one lip, usually the lower one. This form usually occurs among young people who frequently moisturize their lips, followed by people with vitamin B₁₂ or iron deficiency, oral candidiasis, patients with allergies. Another case is patients with HIV and associated with candida infection. Exfoliative cheilitis common manifestation is peeling of the vermillion (lip border) [11].

Consequently, exfoliative cheilitis can only represent a histological diagnosis, and only through a correlation with clinical and psychosocial behaviour in factitial cheilitis (Broke, 1978). The difference between exfoliative and factitial cheilitis is very important to understand; If the initial etiology is not considered in the differential diagnosis, in fact, cheilitis is often found that psychosocial factors play a major role. Indeed, factual cheilitis is often diagnosed initially as exfoliative cheilitis; further examination will be able to determine whether the diagnosis is factilitis cheilitis or exfoliative cheilitis [12, 13].

3.2. Clinical Manifestation

Common appearance is a thickened surface layer, which leads to peeling that may be cyclic. Bleeding might be found later followed by the formation of a hemorrhagic crust. The disease may progress due to several factors, e.g., open-mouthed breathing, lip licking, sucking, picking, or biting, bacterial (*Staphylococcus aureus*) or yeast (*Candida albicans*) infection, poor oral hygiene, etc. Some use the term exfoliative cheilitis as an equivalent to cracked lips, which increases confusion around nomenclature [8, 14].



Figure 1: Clinical Appearance of Exfoliative Cheilitis

3.3. B12 Deficiency

Affected patients are likely to have underlying psychiatric illnesses that are either undiagnosed or not properly managed. These include anxiety, depression, attention-seeking behavior, obsessive-compulsive tendencies, delusions, skin-related hallucinations, dissociative disorders, personality disorders, and a history of child abuse. Additionally, early habits are likely to affect adolescents and young adult women; Trigger factors such as psychosocial stressors have recently been temporarily linked to the emergence of self-defeating behavior which is one of the contributing factors for factitial cheilitis. In contrast, exfoliative cheilitis did not show a gender predisposition. Excess keratin buildup and crusting eventually result in desquamation, which can be a natural byproduct of the habit or is manually induced by picking or peeling [15, 16].

Generally, the most commonly etiology of cheilitis in the literature was contact (allergic and irritant), and nutrition factors. As contact cheilitis can be related to the effects of irritants or allergens, it should be investigated with thorough history taking. Some lip lesions require biopsies, such as chronic actinic cheilitis (to examine for severe dysplasia or cancer) or granulomatous cheilitis (to confirm the diagnosis). Micronutrient factors deficiencies that have been associated with cheilitis leading to anaemia are iron, folate, vitamin B12, vitamin A, and zinc. Folate and vitamin B12 are essential for cellular proliferation and erythropoiesis, and their deficiency can depress cell-mediated immunity [17, 18].

B12 is known as the essential nutrient as it keeps the body functioning properly. Lacking in the vitamin could bring a host of symptoms warning of a deficiency and experiencing this sign exfoliative cheilitis might indicate you're deficient. B12 is not created by the human body, so people need vitamin B12 from their diet. Vitamin B12 is crucial for making DNA and red blood cells and it helps support the nervous system. Vitamin B12 also plays a vital role in the production of blood cells. Experiencing this unusual sign on your mouth could be a warning sign that you're lacking vitamin B12 [19, 20].

4. Conclusion

Factitial cheilitis is a chronic condition characterized by hardening

of the skin, hyperkeratosis, and ulceration that befell the patient as a result of self-injurious behavior such as biting the lips accompanied by psychological factors. In contrast to exfoliative cheilitis, factitious cheilitis is a chronic condition characterized by hardening of the skin, hyperkeratosis, and ulceration that befell the patient as a result of self-injurious behavior such as lip biting which is accompanied by psychological factors. Micronutrient factors deficiencies that have been associated with cheilitis leading to anemia are iron, folate, vitamin B12, vitamin A, and zinc. Folate and vitamin B12 are essential for cellular proliferation and erythropoiesis, and their deficiency can depress cell-mediated immunity.

References

- Daley TD, Gupta AK: Exfoliative cheilitis. *J Oral Pathol Med.* 1995; 24: 177-9. 10.1111/j.1600-0714.1995.tb01161.x.
- Reiter S, Vered M, Yarom N, Goldsmith C, Gorsky M: Cheilitis glandularis: clinicohistopathological diagnostic criteria. *Oral Dis.* 2011; 17: 335-9. 10.1111/j.1601-0825.2010.01762.x.
- Leyland L, Field EA. Case report: exfoliative cheilitis managed with anti-depressant medication. *Dent Update.* 2004; 31: 524-6.
- Bologna JL, Jorizzo JL, Rapini RP, editors. *Bologna Textbook of Dermatology.* 2nd ed. Spain: Mosby Elsevier publishing; 2008: chap 51. James WD, Berger TG, Elston DM, eds. *Andrews' Diseases of the Skin: Clinical Dermatology.* 11th ed. Philadelphia, Pa: Saunders Elsevier. 2011: chap 22.
- Almazrooa SA, Woo SB, Mawardi H, Treister N. Characterization and management of exfoliative cheilitis: a single-center experience. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2013; 116: e485-9. 10.1016/j.oooo.2013.08.016.
- Bork K. Diseases of the lips and mouth. In: Burgdorf WHC, Plewig G, Wolf HH, Landthaler M, eds. *Braun-Falco's Dermatology,* 3rd edn. Berlin: Springer-Verlag, 2009; p. 1081-107.
- Park KK, Brodell RT, Helms SE. Angular cheilitis. Part 2: Nutritional, systemic, and drug-related causes and treatment. *Cutis.* 2011; 88: 27-32.
- Mani SA, Shareef BT. Exfoliative cheilitis: report of a case. *J Can Dent Assoc.* 2007; 73: 629-32.
- <https://pubmed.ncbi.nlm.nih.gov/23568570/>
- Reichart PA, Weigel D, Schmidt-Westhausen A, Pohle HD. Exfoliative cheilitis (EC) in AIDS: association with *Candida* infection. *J Oral Pathol Med.* 1997; 26: 290-3. 10.1111/j.1600-0714.1997.tb01239.x.
- Martins-Filho PR, Silva LC, Piva MR. The prevalence of actinic cheilitis in farmers in a semi-arid northeastern region of Brazil. *Int J Dermatol.* 2011; 50: 1109-14. 10.1111/j.1365-4632.2010.04802.x.
- de Souza Lucena EE, Costa DC, Silveira EJ, Lima KC. Prevalence and factors associated to actinic cheilitis in beach workers. *Oral Dis.* 2012; 18: 575-9. 10.1111/j.1601-0825.2012.01910.x.
- Charpentier C, Kottler D, Fite C, Pelletier AL, Deschamps L, Descamps V et al. A surprising granulomatous cheilitis. *Gastroenterology.* 2017. pii: S0016-5085(17)35880-8. doi: 10.1053/j.gastro.2017.07.005.
- Field EA, Speechley JA, Rugman FR, Varga E, Tyldesley WR. Oral signs and symptoms in patients with undiagnosed vitamin B12 deficiency. *J Oral Pathol Med.* 1995; 24: 468-70.
- Lu SY, Wu HC. Initial diagnosis of anemia from sore mouth and improved classification of anemias by MCV and RDW in 30 patients. *Oral Surg Oral Med Oral Pathol Oral Radiol Oral Endod.* 2004; 98: 679-85.
- Ruscin JM, Page RL 2nd, Valuck RJ. Vitamin B12 deficiency associated with histamine2-receptor antagonists and a proton-pump inhibitor. *Ann Pharmacother.* 2002; 36: 812-6.
- Bradford GS, Taylor CT. Omeprazole and vitamin B12 deficiency. *Ann Pharmacother.* 1999; 33: 641-3.
- Force RW, Nahata MC. Effect of histamine H2-receptor antagonists on vitamin B12 absorption. *Ann Pharmacother.* 1992; 26: 1283-6.
- Rajan S, Wallace JI, Beresford SA, Brodtkin KI, Allen RA, Stabler SP et al. Screening for cobalamin deficiency in geriatric outpatients: prevalence and influence of synthetic cobalamin intake. *J Am Geriatr Soc.* 2002; 50: 624-30.
- Carmel R, Green R, Rosenblatt DS, Watkins D. Update on cobalamin, folate, and homocysteine. *Hematology Am Hematol Educ Program.* 2003: 62-81.