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## Concurrently Oral Candidiasis and Oral Hairy Leukoplakia (OHL) As a Clinical Predictive of HIV infection

Dr. Dewi Priandini , drg., SPPM

Department of Oral Medicine

Faculty of Dentistry Trisakti University, Indonesia, email: dpriandini@gmail.com / dewipriandini@trisakti.ac.id

### ABSTRACT

#### Introduction

Acquired immunodeficiency syndrome (AIDS) present oral manifestations such as oral candidiasis (erythematous and pseudomembranous), oral hairy leukoplakia (OHL). The presence of oral candidiasis and OHL within the oral cavity not only suggests HIV infection, but is possibly one of the first signs of development into AIDS in the HIV-infected individual

#### Case Presentation

A 26 -year -old female reported to the Dental Hospital of Faculty Dentistry of Trisakti University with complaint of burning sensation and oral discomfort, altered taste at the tongue from the past since 6 months. Intra Oral examination revealed white lesion at dorsal of the tongue and red lesion at the middle of the tongue and also vertical white lesion looks like a plaque at the ventral of the tongue .

#### Conclusion

Oral candidiasis is one of the most common, seen in persons with HIV or AIDS . The oral health status of an HIV-infected patient at presentation is an extremely important parameter. Very important to verify whether there is a relationship between the presence of OHL and clinical characteristics of the patients.

**Keywords:** HIV -AIDS, , Oral Candidiasis, Oral Hairy Leukoplakia, Clinical Characteristics

### INTRODUCTION

In recent decades, concerns about disease of the human immune system caused by the human immunodeficiency virus (HIV), has increased. 1 Risk of many HIV-related diseases varies with the patient's degree of immunosuppression. Oral Mucosal infections, such as Oral Candidiasis is one of the most common seen in persons with HIV or AIDS. More than 90% of patients with AIDS, has related oral candidiasis affects approximately one third of HIV-seropositive patients.2 Oral candidiasis is one of the earliest premonitory signs of HIV infection and may present as angular cheilitis , erythematous, pseudomembranous, hyperplastic, or papillary variants.3 HIV-related oral candidiasis is associated with xerostomia, severity of disease, depression of cell-mediated immunity, and older age . 3 The commonly isolated species are *Candida albicans* and incidence isolated from the oral cavity has been reported to be 95% of patients with HIV. 4

Oral hairy leukoplakia (OHL) is most common in people with HIV. OHL is an oral mucosal lesion that is associated with Epstein-Barr virus infection. OHL commonly presents, on-removable white patch on the lateral borders of the tongue in individuals who are immunocompromised, and asymptomatic.5 The symptoms of oral hairy leukoplakia may look like other medical conditions or problems. The characteristic clinical presentation of OHL is not removable by scraping, white patch with a corrugated surface typically involving the lateral and dorsolateral surfaces of the tongue bilaterally, the patches cause discomfort and taste changes, although sometimes asymptomatic .6,7 In most Oral hairy leukoplakia can be diagnosed clinically and does not require a confirmatory biopsy, the treatment It does not require specific and frequently resolves under HAART, if associated with HIV infection.5

### CASE PRESENTATION

A 26 -year -old female, house wife was referred to the Oral Medicine Department at Dental Hospital of Faculty Dentistry of Trisakti University with a chief complaint of burning sensation and oral discomfort, altered taste at the tongue from the past 6 months. The patient gave a history she worked as a sales promotion girls for 5 years , but now it's just a housewife . Weight loss about 10 kilos in three months , she was a non-smoker .The medical history, she has gastritis is currently under medical care . Extra oral examination of the head and neck was remarkable and painless . Intra Oral examination revealed white patch at dorsal surfaces and red at the middle of the tongue and also at the oropharynx and palatum molle (fig 1) . Similar white patch also present at ventral of the tongue (fig.2) , at the lateral of the tongue and also vertical white lesion looks like a plaque at the lateral of the tongue . Erythematous patches and vertical white lesion on the right and left lateral of the tongue.(fig.3a , fig.3b). The erythematous area was superimposed with nodular white projections that were non scrapable. Similar patch was present on the palate. A non scrapable hyperkeratosis patch measuring 1 × 1 cm was also present on the dorsum of the tongue.



(fig.1)



(fig.2)

**Fig 1.** located on the dorsal tongue surfaces. **Fig 2.** white patch at ventral of the tongue



(fig.3a)



(fig.3b)

**Fig.3a and Fig.3b**, erythematous patches on the right and left retrocommissural areas

Subsequently the patient was prescribed topical antifungal (Nystatin suspension) and for symptomatic therapy (chlorhexidine gluconate 0,2%) to reduces bacteria . The lesions on the middle of the dorsal and ventral of the tongue showed improvement within 7 days ( fig.4a; fig.4b) ; however, there had been no changes and it became even worse in the appearance of this lesion at the lateral of the tongue. Testing for HIV was positive. The patient's CD4 count was 103,5 cell/ $\mu$ L (normal 500-1500 cell/ $\mu$ L ) .



(fig.4a)



(fig.4b)

**Fig.4a ; Fig.4b** located on the dorsal tongue surfaces and ventral showed improvement.



(fig.5)

**Fig.5.** No improvement was seen on the lateral tongue it became even worse

## DISCUSSION

According to Chellammal (2014)<sup>2</sup>, *Candida albicans* is generally causes no problems in healthy people and a normal commensal of the mouth .Oral candida colonization and candidiasis have received recently increased attention by the health care. Risk of many HIV-related diseases varies with the patient's degree of immunosuppression. Oral manifestations such as oral candidiasis (OC), oral Hairy leukoplakia (OHL), necrotizing ulcerative gingivitis, and necrotizing ulcerative periodontitis Kaposi's sarcoma, non-Hodgkin's lymphoma, linear gingival erythema, are strongly associated with HIV and have been identified internationally, and also the earliest and most important indicators of HIV infection. <sup>8</sup> The commonly isolated species are *Candida albicans* , *Candida tropicalis*, *Candida glabrata* and *Candida krusei* and to smaller quantities *Candida lusitanae*, *Candida dubliniensis*, *Candida kefyr*, *Candida guilliermondii*, *Candida parapsilosis* and *Candida lipolytica*.<sup>9</sup> Oropharyngeal

candidiasis is the commonest fungal infection amongst HIV infected patients worldwide.<sup>10</sup> The incidence of *Candida albicans* isolated from the oral cavity has been reported to be 95% of patients with HIV.<sup>4</sup>

OHL is a benign Epstein Barr Virus (EBV) associated lesion that most commonly presents as, corrugated white patch on the lateral borders of the tongue , an asymptomatic. EBV as human herpes virus , is known to infect over 95% of the world's adult population.<sup>7,11</sup> Primary infection activates the innate and adaptive immune systems, and the virus remains latent lifelong by living in memory B lymphocytes. It is primarily transmitted through saliva as infected cells are shed into the oral cavity. The clearly established link between EBV and OHL its exact role is still unclear, remains as to whether OHL arises as a result of reactivation of latent strains within the tongue epithelium or as a result of repeated direct infection from EBV within the saliva. It has been postulated that the development of OHL occurring on the lateral borders of the tongue may be due to the resting position of the tongue in a pool of EBV-infected saliva in the floor of the mouth.<sup>11</sup> In this case, a provisional clinical diagnosis of white lesion on dorsal and ventral of the tongue was made due to the absence of relevant medical history ( gastritis ) .

## CONCLUSION

Oral candidiasis is one of the most common seen in persons with HIV or AIDS . The oral health status of an HIV-infected patient at presentation is important parameter. The main step is verify how the relationship between the presence of OHL and clinical characteristics of the patients.

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# Concurrently Oral Candidiasis and Oral Hairy Leukoplakia (OHL) As a Clinical Predictive of HIV infection

*by Dewi Priandini FKG*

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## Concurrently Oral Candidiasis and Oral Hairy Leukoplakia (OHL) As a Clinical Predictive of HIV infection

Dr. Dewi Priandini , drg., SpPM

Department of Oral Medicine

Faculty of Dentistry Trisakti University, Indonesia, email: dpriandini@gmail.com / dewipriandini@trisakti.ac.id

### ABSTRACT

#### Introduction

Acquired immunodeficiency syndrome (AIDS) present oral manifestations such as oral candidiasis (erythematous and pseudomembranous), oral hairy leukoplakia (OHL). The presence of oral candidiasis and OHL within the oral cavity not only suggests HIV infection, but is possibly one of the first signs of development into AIDS in the HIV-infected individual

#### Case Presentation

A 26 -year -old female reported to the Dental Hospital of Faculty Dentistry of Trisakti University with complaint of burning sensation and oral discomfort, altered taste at the tongue from the past since 6 months. Intra Oral examination revealed white lesion at dorsal of the tongue and red lesion at the middle of the tongue and also vertical white lesion looks like a plaque at the ventral of the tongue .

#### Conclusion

Oral candidiasis is one of the most common, seen in persons with HIV or AIDS . The oral health status of an HIV-infected patient at presentation is an extremely important parameter. Very important to verify whether there is a relationship between the presence of OHL and clinical characteristics of the patients.

**Keywords:** HIV -AIDS, , Oral Candidiasis, Oral Hairy Leukoplakia, Clinical Characteristics

### INTRODUCTION

In recent decades, concerns about disease of the human immune system caused by the human immunodeficiency virus (HIV), has increased. 1 Risk of many HIV-related diseases varies with the patient's degree of immunosuppression. Oral Mucosal infections, such as Oral Candidiasis is one of the most common seen in persons with HIV or AIDS. More than 90% of patients with AIDS, has related oral candidiasis affects approximately one third of HIV-seropositive patients. 2 Oral candidiasis is one of the earliest premonitory signs of HIV infection and may present as angular cheilitis , erythematous, pseudomembranous, hyperplastic, or papillary variants. 3 HIV-related oral candidiasis is associated with xerostomia, severity of disease, depression of cell-mediated immunity, and older age . 3 The commonly isolated species are *Candida albicans* and incidence isolated from the oral cavity has been reported to be 95% of patients with HIV. 4

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