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**THE PREVALENCE OF ORAL MUCOSA DISEASE OF GUSTI HASAN AMAN
 DENTAL HOSPITAL IN BANJARMASIN, SOUTH KALIMANTAN**

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Abstract

Background: Society often underestimate oral health problem. They mostly visit the dentist when the chief complain eventually disturb their mastication, deglutination and speech function. Until recently, there has been no data provided for the prevalence of oral mucosa disease in Indonesia, as well as the prevalence of oral mucosa disease in Banjarmasin, South Kalimantan. **Objective:** To discover the prevalence of oral mucosa disease in Gusti Hasan Aman Dental Hospital, Banjarmasin, South Kalimantan in 2014-2017. **Material and Methods:** This is a retrospective descriptive study. The sample of this study was obtained by purposive sampling method from patients' medical record who visited Department of Oral Medicine, Gusti Hasan Aman Dental Hospital Banjarmasin in 2014-2017, complied the inclusion and exclusion criteria. Data was obtained from final diagnosis of patients' disease written in medical record which then presented in graphics. **Result:** It was found that the prevalence of oral mucosa disease in Gusti Hasan Aman Dental Hospital in 2014-2017 comprised of Recurrent Aphthous Stomatitis (SAR) in 397 patients (45,42%), Traumatic Ulcer in 263 patients (30,08%), Oral Candidiasis in 92 patients (10,53%), Viral Infection in 88 patients (10,07%), Allergic Stomatitis in 26 patients (2,97%), and other diseases in 8 patients (0,92%). **Conclusion:** The highest prevalence of oral mucosa disease in Gusti Hasan Aman Dental Hospital in 2014-2017 year is Recurrent Aphthous Stomatitis, followed by Traumatic Ulcer, and infectious diseases comprise of oral candidiasis and viral infection.

Keyword: Oral mucosa disease, prevalence, south Kalimantan

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Introduction

Society often underestimate oral health problem. Oral mucosal disease often classified as mild, non-infectious, and non life-threatening disease. They mostly visit the dentist when the chief complain eventually disturb their mastication, deglutination and and speech function.^{1,2} Oral mucosa diseases which often cause problem are recurrent aphthous stomatitis, traumatic ulcer, candidiasis, herpes virus infection, lichen planus and malignancy of oral mucosa.³

Dentists play an important role for accurate diagnosis in order to manage the diseases well. Some of oral mucosal diseases show the presentation of clinical manifestation from systemic diseases such as infection, allergic reaction, inflammatory disorders, metabolic and endocrine disorders, hematologic disease, and

malignancy. In order to obtain accurate diagnosis, it is important to attain medical history, clinical examination, laboratory and radiology tests.⁴

Oral mucosal disease which cause ulceration has potential to undergo secondary infection. This is ensued by oral microorganisms which are classified whether as commensals or pathogens. The treatment of these diseases are by applying topical drugs which consist of antiseptic.⁵

Until these days, there has been no data about the prevalence of oral mucosal disease in Indonesia, as well as in Banjarmasin, South Kalimantan. This study aims to discover the prevalence of oral mucosal disease in Gusti Hasan Aman Dental Hospital, Banjarmasin, Kalimantan Selatan in 2014-2017.

Material and Methods

This is a retrospective descriptive study. This study had been approved by ethical clearance committee in Faculty of Dentistry, University of Lambung Mangkurat No 074/KEPKG-FKGULM/EC/VI/2018. Population of this study is all patients' medical record who visited Department of Oral Medicine in Gusti Hasan Aman Dental Hospital in 2014-2017. Samples of this study are taken by purposive sampling method, which were from patient medical record who visited Department of Oral Medicine in Gusti Hasan Aman Dental Hospital in 2014-2017, complied the inclusion and exclusion criteria. Inclusion criteria is medical record of patient who finished the treatment until the lesion healed. Exclusion criteria is patient who was not routinely controlled.

Variable of this study is the prevalence of oral mucosa disease in patient who visit Department of Oral Medicine in Gusti Hasan Aman Dental Hospital in 2014-2017. This study was conducted in Department of Oral Medicine, Gusti Hasan Aman Dental Hospital Banjarmasin on July to October 2018. The procedure of this study was as below: The examination was done on every patient medical record who sought treatment at Department of Oral Medicine in 2014-2017, then continued by choosing the patient status who carried the treatment until the lesion healed. The medical record of patient who was not routinely controlled would not be taken. Data was obtained from final diagnosis of patient disease in medical record. The data then presented in graphics.

Result

The result of this study shows that there were 874 patients who complied as the samples and visited Department of Oral Medicine in Gusti Hasan Aman Dental Hospital in 2014-2017. The prevalence of diseases found were Recurrent Aphthous Stomatitis in 397 patients (45,42%), Traumatic Ulcer in 263 patients (30,09%), Oral Candidiasis in 92 patients (10,53%), Viral Infection in 88 patients (10,07%), Allergic Stomatitis in 26 patients (2,97%), and other diseases in 8 patients (0,92%). This can be seen in Figure 1.

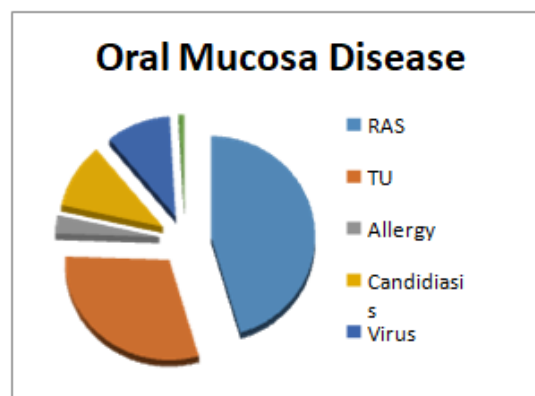


Figure 1. Graphic of Oral Mucosa Disease Prevalence in Gusti Hasan Aman Dental Hospital in 2014-2017

The result of this study shows that Oral Candidiasis were found in 92 patients who visited Gusti Hasan Aman Dental Hospital in 2014-2017. They comprised of Angular Cheilitis in 87 patients, Denture Stomatitis in 4 patients and Oral Thrush in 1 patients. It can be seen in Figure 2.

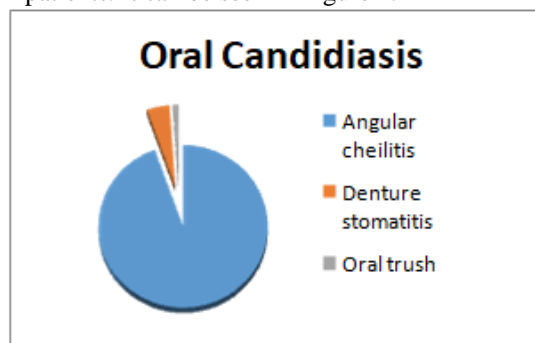


Figure 2. Distribution of Oral Candidiasis in Department of Oral Medicine, Gusti Hasan Aman Dental Hospital in 2014-2017.

The result of this study shows viral infection diseases in 88 patients who visited Gusti Hasan Aman Dental Hospital in 2014-2017. It comprised of Mumps in 57 patients, Varicella zoster in 20 patients, Herpes zoster in 3 patients, Primary Herpetic Gingivostomatitis in 2 patients, Herpangina in 2 patients, Infectious of Mononucleosis in 2 patients, Hand Foot and Mouth Diseases in 1 patients and Herpes labialis in 1 patients. It can be seen in Figure 3.

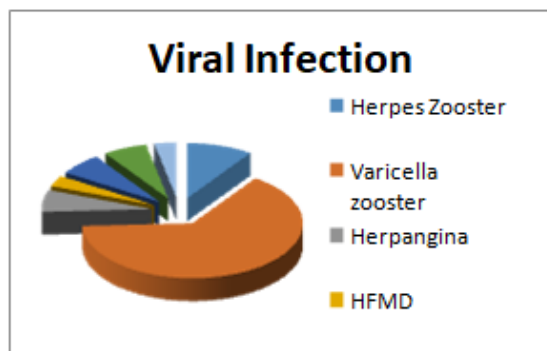


Figure 3. Distribution of Viral Infection in Department of Oral Medicine, Gusti Hasan Aman Dental Hospital 2014-2017

Discussion

The result of this study shows the highest prevalence of oral mucosa diseases in Gusti Hasan Aman Dental Hospital in 2014-2017 is Recurrent Aphthous Stomatitis (SAR). It comprises of 45,42% from total cases. The prevalence of Recurrent aphthous stomatitis in the world is 5-66% in the average of 20%. The previous study by Apriasari and Puspitasari (2016) which conducted in Gusti Hasan Aman Dental Hospital in 2016 showed that 66% cases occurred and 34,3% cases were triggered by stress as the predisposing factor.⁶ Recurrent aphthous stomatitis is an inflammatory disease which caused by abnormality of cytokine cascade in oral mucosa tissue. This cytokine abnormality can be caused by the abnormality in body immune system.

RAS etiology has not been known. It is suspected that the occurrence of RAS is caused by predisposing factors. This comprises of genetic, trauma, abnormal immunology, gastrointestinal disease, hormonal, HIV, stress, infection, and nutrient deficiencies. Clinical manifestation of RAS are ulcer, single or multiple, shallow, oval-shaped and painful. Recurrent aphthous stomatitis consists of three types, which are minor type, major type and herpetiform. Prodromal symptoms arise before the occurrence of RAS including the uncomfortable sensation and erythema for 1-3 days, and then followed by painful ulcer in oral mucosa. Lesions are occurred in keratinized region of oral mucosa such as buccal mucosa, labial mucosa, tongue, floor of the mouth, soft palate and uvula.^{1,3,7}

The second result of oral mucosal disease prevalence in Gusti Hasan Aman Dental Hospital is traumatic ulcer which comprises of 30,09% from total cases. Traumatic ulcer prevalence is high in certain countries, some of the studies in certain population shows prevalence of 3-24%. The cause of traumatic ulcer is accident which sometimes resulted in wound to emerge. This can be happened when talking, sleeping or chewing food. Clinical manifestation of traumatic ulcer is the presence of

pain, ulceration with yellow base surrounded by erythema, irregular, and no presence of induration. The main treatment of traumatic ulcer is the elimination of etiologic factor. If the ulcer persists for more than two weeks after the elimination of traumatic factor, biopsy needs to be done. This is caused by the probability of traumatic ulcer to progress to oral squamous cell carcinoma.^{7,8}

The third result of oral mucosal prevalence study in Gusti Hasan Aman Dental Hospital is Oral Candidiasis (10,53%) which comprises Angular Cheilitis as the highest among the cases. Angular cheilitis is caused by infection of two microorganisms which are *Candida albicans* and *Staphylococcus aureus*. This disease is also caused by predisposing factor such as vitamin B12 deficiency, iron deficiency, reduction in face vertical dimension, and history of allergy.³

Based on nutrition deficiency prevalence of World Health Organization (WHO), South Kalimantan is classified to have heavy risk because has more than 10% prevalence. Based on Pemantauan Status Gizi (PSG) in 2016, South Kalimantan shows to have 21,8% of malnutrition cases. This malnutrition condition can caused by vitamin B12, folic acid and iron deficiency.

Patient who undergoes vitamin B12, folic acid, and iron deficiency are prone to anemia. Anemia pathophysiology which caused angular cheilitis is by decreasing mitochondria enzymes activity in cell resulted in the disturbance of oxygen and nutrition transport. This condition can cause the degradation of cellular immunity, reduction in bactericidal activity of polymorphonuclear leukocytes, inadequate ability of antibody response and abnormality in epithelial tissues. Anemia reduces the activity of mitochondrial enzymes in cell because of oxygen and nutrition transport are disturbed. This condition lead to the inhibition of epithelial cell differentiation and growth. As the result, the terminal differentiation process of epithelial cells toward stratum corneum will be hampered and the oral mucosa tissue will become thinner, because of the loss of normal keratinization, atrophy and easily ulcerated. This process also explains the cause of tongue depapilation in patient.^{10,11,12}

The fourth result of oral mucosal disease prevalence study at Gusti Hasan Aman Dental Hospital is viral infection (10,07%) comprises of Varicella zoster infection as the highest case. Varicella zoster virus can become latent in neural ganglion. Epidemiologically, this disease mostly occurred in children. Varicella zoster virus can be reactivated into herpes zoster in older age. Immunocompromised patients will be at risk to varicella zoster infection, moreover to be

reactivated into herpes zoster and post herpetic neuralgia which can lead to death.^{3,8}

The prevalence of infectious disease at Department of Oral Mucosa, Gusti Hasan Aman Dental Hospital Banjarmasin is quite high where oral candidiasis infection has prevalence of 10,53% and viral infection of 10,07%. People in Banjarmasin has poor nutrition category, so that they are potential in the occurrence of anemia. One of immunocompromised condition is found in patient with nutrition deficiency. This is caused by the presence of anemia in patient with nutrition deficiency so that it is easier to be infected as the result of incompetent immune system. In some population, around 50% of immunocompromised patients experience malnutrition. Immunocompromised condition cause reduction in phagocytosis function of complement system so it is unable to destroy bacterias and viruses. Severe anemia can lead to the decrease of bone marrow function. It will reduce the production of IL-6 and TNF- α . This also lead to the deflation of T and B cells function.¹³

Based on above, it is important to provide plethora of medias to increase public knowledge about the relation between nutrition and health especially dental and oral health. It is important for people to be aware about the food consumed, not only the one which is delicious but also highly nutritious. It can be concluded that the highest oral mucosal disease prevalence in Gusti Hasan Aman Dental Hospital in 2014-2017 are Recurrent Aphthous Stomatitis, followed by traumatic ulcer, and infectious disease such as oral candidiasis and viral infection.

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