

## Management of chicken pox ulcer manifestation in an 8-years-old patient Penatalaksanaan manifestasi ulkus akibat cacar air pada pasien berusia 8 tahun

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### ABSTRACT

**Background:** Chicken pox is the primary acute infectious disease caused by the Varicella-Zoster Virus (VZV) which attacks skin and mucosa accompanied by polymorphic skin disorders, mainly located in the central part of the body. **Case:** an 8-years-old woman came to the Dental Hospital, Jember University complaining about pain felt on the upper lip when used for eating for 7 days. The patient also had a fever and fluid-filled lumps appear in both hands and back since about 6 days ago. Clinical overview of the upper lip show erosion, irregular shape, clear borders, red, moist lesions, rough surfaces and pain. In both hands there are lesions in the form of erosion, the base is red, moist and the boundary is clear. **Management:** Therapy applied to patients i.e. Alocclair gel as a topical analgesic medicine and moisturizer, Acyclovir tablet as an antiviral agent, paracetamol syrup as an antipyretic and multivitamin B complex as supporting therapy. **Discussion:** Chicken pox is a disease that can heal itself, but to speed up healing process and to reduce discomfort due to the symptoms that appear, causative and supportive cares are necessary. **Conclusions:** Management of a chicken pox patient aged 8 years old is conducted by providing Alocclair oral gel, Acyclovir tablets, paracetamol syrup and multivitamin of vitamin B complex and zinc to support healing process, and instruct the patient to avoid direct contact with other people.

**Keywords:** children, chickenpox, Varicella zoster virus

### ABSTRAK

**Latar Belakang:** Cacar air adalah penyakit infeksi akut primer yang disebabkan oleh virus Varicella-Zoster (VZV), yang menyerang kulit dan mukosa disertai dengan gangguan kulit polimorfik, terutama di bagian tengah tubuh. **Kasus:** seorang perempuan berusia 8 tahun datang ke Rumah Sakit Gigi Mulut, Universitas Jember mengeluh tentang rasa sakit yang dirasakan di bibir atas ketika makan selama 7 hari. Pasien juga mengalami demam dan benjolan berisi cairan muncul di kedua tangan dan punggung sejak sekitar 6 sebelumnya. Gambaran klinis erosi pada bibir atas, bentuknya tidak beraturan, batas jelas, merah, lesi lembab, permukaan kasar dan nyeri. Di kedua tangan ada lesi dalam bentuk erosi, dasarnya merah, lembab dan batasnya jelas. **Penanganan:** Terapi diterapkan pada pasien, yaitu gel Alocclair berfungsi sebagai obat analgesik topikal dan pelembab, tablet Acyclovir, sirup parasetamol dan multivitamin B kompleks. **Pembahasan:** Meskipun cacar air bisa sembuh sendiri, tetapi untuk mempercepat penyembuhan dan mengurangi ketidaknyamanan akibat gejala yang muncul, diperlukan perawatan kausatif dan suportif. **Simpulan:** Penanganan pasien chicken pox berusia 8 tahun dilakukan dengan pemberian Alocclair oral gel, Acyclovir tablet, parasetamol sirup and multivitamin vitamin B kompleks and zinc untuk mendukung proses penyembuhan dan instruksi untuk menghindari kontak langsung dengan pasien.

**Kata kunci:** anak-anak, cacar air, virus Varicella zoster

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### INTRODUCTION

Chicken pox is one of the common diseases in children but can also attack adults. Chicken pox, in Indonesia, is suspected to occur frequently during the rainy season to summer or *vice versa*. Chicken pox is found throughout the world and there is no race or gender different. This disease is caused by *Varicella Zoster Virus* (VZV).<sup>1</sup>

That virus is responsible for two major clinical infections in humans i.e. chicken pox, and herpes zoster or snake pox. Chicken pox is a primary infection that occurs first in individu who come into contact with the *Varicella Zoster* virus. In 3-5 individuals out of 100 peoples, the VZV undergoes reactivation which causes recurrent infection known as herpes zoster or shingles.

The VZV is one of eight herpes viruses that cause infection in human.<sup>2</sup>

The VZV is transmitted through the respiratory route with viral particles present in respiratory droplets 24-48 hours before the appearance of the rash, and in fluid skin lesions of the infected person. The rate of secondary attack from primary varicella is susceptible to children, estimated to be between 61-100%, whereas the rate of secondary attacks after contact with herpes zoster is lower by around 15%.<sup>3</sup>

Chicken pox is a disease that can heal itself, generally emerging symptoms of discomfort, fever and vesicular fever. Complications of chickenpox infection occur in about 1% of cases, i.e. secondary bacterial infections of the skin. Other complications include

pneumonia, encephalitis and cerebellar ataxia, more thrombocytopenia and hepatitis. This infection in adolescents and adults are usually more severe than infection in children. The average of vesicles in the skin is usually 250-500 but more than 500 lesions can occur in severe cases.<sup>4</sup>

The manifestation of chicken pox in the oral cavity can be a lesion on the mucosa often preceding lesions in the skin area. All areas of the mouth can be affected, mostly in the form of vesicles which rapidly change to ulceration.<sup>5</sup>

Treatment for healthy children suffering from chicken pox is symptomatic, including using calamine lotion to reduce itching and acetaminophen for fever and pain. Antiviral treatment (acyclovir) for chicken pox in healthy patients is based on age group, because the severity of chicken pox varies according to age. From some studies, acyclovir is proven safe and can reduce the duration of fever and the number of lesions arising. The Center for Disease Control and Prevention (CDC) recommends children suffering from chicken pox stay at home for six days after the onset of the rash to prevent transmission to surrounding people.<sup>4</sup>

This article is aimed to describe the management of chicken pox ulcer manifestation in an 8-years-old patient.

### Case

An 8-years-old Madurese female came to clinic on March 28, 2019. The patient which was currently studying at SDN 3 Summersari, complained pain on the upper lip since about 5 days ago, when eating for 7 days. The patient also had a fever and fluid-filled lumps appear in both hands and back since  $\pm$  6 days ago.

The patient has 110 cm height and 20 kg weight, BMI 16.6 (normal), no medications in last 6 months, socioeconomic was moderate, and no bad habit and family medical history.

On extra oral, it appears erosion, lesions and vesicles in the hand and vesicles on the hands (Fig. 2a), and erosion and lesions on the palm (Fig. 2b).

The cheeks was normal, upper and lower lips was appeared to have erosion (Fig. 1), irregular shape, clear border, red, moist, rough surface and sore. The corner of the right and left of the mouth have no symptoms. The salivary glands, neck lymph glands, and anterior and posterior auricularis glands have no symptoms.

In intra oral, appears teeth root of 51, 61, 75 and 85; teeth 52 and 62 have caries. All of these teeth have been extracted at Dental Hospital of Jember University. Upper and lower labial mucosa, cheek

mucosa, buccal folds, gingiva mucosa, tongue, base of mouth and tonsils have no symptom.



**Fig 1** Erosion of the upper lip



**Fig 2A** Erosion, lesions and vesicles in the hand, **B** erosion and lesions in the palm

Patient was diagnosed as chicken pox so that treated by administration of topical aloe vera gel, analgesics, antiviral acyclovir tablet, antipyretic paracetamol syrup, and multivitamin B complex syrup.

### Management of lesions on the lips

Lesions on the lips were managed by a series of stages, consecutively the lesion is dried using a cotton roll, aseptics of the work area using a cotton pellete moistened with povidone iodine. Then, after applied aloe vera gel to the lesion with using a cotton pellete, instruct the patient not to lick the lesion and eat or drink after more than 30 minutes.

Patient was treated by administration of topical Aloe vera gel was applied to the lips, acyclovir 200 mg tablet 4 times a day half a tablet after meals, paracetamol syrup if needed, and multivitamin B complex syrup 2 times a day 5 mL.

The patient was instruct to have enough rest, avoid contact with other people, maintain hygiene of the oral cavity, take the medicine as recommended, eat regularly, have balanced nutritious foods together and consume multivitamins, and get control in one week later.

### Control I

The patient's lips were no longer pain, the (fig.3) lesions on both hands were dried and left marks. The medicines were used as recommended. Anti-viral medicines and multivitamins were up, topical anti-inflammatory were one third remaining, anti-

pyretic medicines were three fourth remaining. Extra and intra oral were no symptom (fig.4).



**Fig 3** The lesions on the hands and palms have dried and left marks



**Fig 4** Lesions on the lips cured

Therapy was completed with briefing patient to maintain hygienity of the oral cavity, consume regular, balanced nutrition, and multivitamins, and having enough rest.

## DISCUSSION

Chickenpox is a disease of children, which occurs because of an attack of VZV infection. The symptoms include fever, headache, dry cough, and characteristic itching rash through papules, vesicles, and crusts phases. Establishing diagnosis through a comprehensive history and physical examination allows a doctor results an adequate diagnosis. In the patient, viral infections play a role as a causative factor for lesions in the oral cavity.<sup>6,8</sup>

According to Theresia, chickenpox is a disease that is very contagious and usually attacks children.<sup>4</sup> In this case the patient is 8-years-old, the age where immune system in body has not been fully formed

thus she is vulnerable to be infected with the virus.<sup>7</sup>

The treatment provided to patient is an Alocclair oral gel to eliminate complaints of pain on upper lip. This gel is a steroid anti-inflammatory medicine. Anti-inflammatory steroid works inhibiting enzyme of phospholipase so that the phospholipid do not synthesize arachidonic acid thereby inhibiting the lipoxygenase and cyclo-oxygenase pathways to prevent pain due to inflammation.<sup>11</sup>

The patient was also provided with acyclovir tablets as causative therapy. Acyclovir is a synthetic medicine type of purine nucleoside analogue, has antiviral properties against the VZC by inhibiting virus DNA synthesis. From this study, acyclovir proved to be safe and could reduce the duration of fever and the number of lesions.<sup>12</sup>

The patient was also treated by taking antipyretic paracetamol because the patient still felt fever. The mechanism of action of paracetamol causes antipyretic effect by increasing heat elimination in a patient with high body temperature by increasing dilation of the peripheral blood vessels and mobilization of water thus occurred blood dilution and perspiration. The decrease in temperature is the result of medication works in the central nervous system involving the temperature control center in hypothalamus. Medicine absorption in gastrointestinal tract is fast and almost perfect, the highest plasma level reached in  $\pm 0.5$ -1 hour after oral administration, with plasma half-life  $\pm 1$ -2.5 hours.<sup>9</sup>

The patient was also provided supportive therapy i.e. multivitamin thus the process of repairing damaged cells due to infection of VZV can take place faster and to restore the immune system in order to prevent repeated infection.<sup>10</sup>

Management of a chicken pox patient aged 8 years old is conducted by providing alocclair oral gel which was administered on the lips 3 times a day, acyclovir tablet 4 times a day 100 mg, paracetamol syrup three times a day and multivitamin of vitamin B complex and zinc twice a day to support healing process, and instruct the patient to avoid direct contact with other people to prevent the virus spread.

## REFERENCES

1. Kadri, Rehman, Rehana, Gergianaki. Rising trends of chicken pox outbreaks among school children in Kashmir, India-suggestions for health policy. *EC Bacteriology and Virology Research* 2.5 (2017): 179-90.
2. Baljic, Dautovic, Koluder-Cimic, Hukic, Hadzic, Seremet, Ibrahimovic. Characteristics of chickenpox in children and adults at a tertiary health center in Sarajevo, Bosnia-Herzegovina. *J Microbiol Infect Dis* 2012; 2 (2): 64-7.
3. Prymula R, Bergsaker MR, Esposito S. Protection against varicella with two doses of combined measles-mumps-rubella-varicella vaccine versus one dose of monovalent varicella vaccine: a multicentre, observer-blind, randomised, controlled trial. *The Lancet* 2014; 383: 1313-24.
4. Theresia, Sri Rezeki, Hadinegoro. Terapi asiklovir pada anak dengan varisela tanpa penyulit. *Sari Pediatri* 2013; 11 (6)
5. Singh M. Outbreak of chickenpox in a union territory of North India. *Indian J Medical Microbiol* 2015; 33(4):524-7.
6. Khaleel HA, Abdelhussein HM. Clinical epidemiology of chickenpox in Iraq 2007-2011. *Global J Health Sci* 2012;5:180-6.

7. Sondakh C, Kandou R, Kapantow G. Profil varisela di Poliklinik Kulit dan Kelamin RSUP Prof. Dr. R.D Kandou Manado Periode Januari – Desember 2012. *Jurnal e-Clinic (eCl)* 2015; 3(1).
8. Schots JPM, Moons P, Stoot JHMB. *Case report: management of varicella gangrenosa: a life-threatening condition from chickenpox.* Case Reports in Medicine 2014; Article ID 206152. 3 pages.
9. Ebta NA, Anastasia SP. Studi uji daya antiinflamasi dan antipiretik ekstrak etanol daun lengkung (*Dimocarpus Longan* Lour) pada tikus putih jantan (*Rattus Norvegicus*) galur wistar. *Jurnal Ilmiah Farmasi* 2016; 12(2): 44-51.
10. Pullar JM, Carr AC, Vissers MCM. The roles of vitamin C in skin health. *MDPI: Nutrients* 2017; 9: 866.
11. Shaikh, Verma, Yadav, Jauhari, Bullangowda. Applications of steroid in clinical practice. *ISRN Anesthesiology* 2012; 11.
12. Szenborn, Głomba, Jackowska, Duszczek, Stanisławska, Marczyńska dkk. Polish consensus guideline on the use of acyclovir in the treatment and prevention of VZV and HSV Infections. *J Infection Chemotherapy* 2016; 22: 65-71.