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## Late latent syphilis accompanied by ocular syphilis in a geriatric patient: A case report



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### ABSTRACT

**Background:** Syphilis is an infectious disease caused by *Treponema pallidum* and is transmitted primarily through sexual intercourse. However, late latent syphilis accompanied by ocular syphilis in geriatric patients is quite seldom. This study aims to determine a case report regarding late latent syphilis accompanied by ocular syphilis in a geriatric patient.

**Case Description:** A 75 years old man, was consulted from the Ophthalmology Department to the Dermatology and Venereology Department with suspect syphilis. Patient came with a chief complaint of blurred vision in the right eye since 2 weeks ago, which is getting

worse since 4 days ago. The laboratory results of complete blood routine, renal function tests, liver function tests, blood sugar levels are within normal limits. The titer result of VDRL was 1:16 and TPHA was 1: 160. Based on anamnesis, physical and laboratory examination, the patient was diagnosed with late latent syphilis and ocular syphilis. The patient was given three weekly interval dose of Benzathine Penicillin G 2.4 million international units intramuscularly.

**Conclusion:** One-month follow-up after the treatment, the patient's condition improved. Blurred vision in the right eye was reduced. There are no complaints of headache and hearing loss.

**Keywords:** late latent syphilis, ocular, geriatric

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### INTRODUCTION

Syphilis is an infectious disease caused by *Treponema pallidum* and is transmitted primarily through sexual intercourse; thus, it is more common in the sexually active age group. Syphilis is a chronic disease and can infect almost any organ of the body, including the eyes.<sup>1,2</sup>

Ocular syphilis is a rare manifestation of syphilis in the eye, which varies in clinical symptoms including red eye, blurred vision, and blindness.<sup>3</sup> The incidence of ocular syphilis could affect the population in a different age. However, based on the previous study, the high frequency of ocular syphilis occurred in the immunocompromised patient like elderly.<sup>3</sup>

Elderly is an age group in humans who have entered the final stages of their life phase. According to the World Health Organization (WHO), an elderly person is someone who has more than 60 years old of age.<sup>4</sup> Data from the Centers for Disease Control, and Prevention shows that sexually transmitted diseases also increase in the elderly group. More than two million cases of chlamydia, gonorrhoea, and syphilis occur in this group with an average age of sufferers from 55 to 64 years.<sup>5</sup>

One case of late latent syphilis will be reported accompanied by ocular syphilis in an elderly person. This case was reported to increase knowledge of the

diagnosis and management of late latent syphilis accompanied by ocular syphilis in the elderly.

### CASE DESCRIPTION

A 75 years old man, was consulted from the Ophthalmology Department to the Dermatology and Venereology Department with suspect syphilis. Patient came with a chief complaint of blurred vision in the right eye since 2 weeks ago, which is getting worse since 4 days ago. The patient currently has no lesions on his skin or genitalia. The patient brought the results of the Venereal Disease Research Laboratory (VDRL) examination and reactive examination of *Treponema Pallidum* Haemagglutination Assay (TPHA).

The patient denied the history of presence wound on his genitalia. He also never complains reddish rash on the body, palms and soles of the feet. Besides, the patient also never complains headache and hair loss. History of other sexually transmitted disease or history of systemic disease were denied.

The patient already got treatment from the Ophthalmology clinic at Sanglah Hospital 1 week ago due to complaints of blurred vision. The Ophthalmology Department diagnose patient with anterior ocular uveitis et causa suspect syphilis. The patient was given prednisolone acetate eye

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drops every 6 hours, Cendo Lyteers every 4 hours, and atropine every 8 hours on the right ocular. After the VDRL and TPHA examination, the patient consulted to Dermatology and Venereology Department.

Patient work as a driver and also as a guide using private car since he was 30 years old. The patient had multiple sexual partners since he was teenagers. Patient's sexual orientation is heterosexual. Other than his wife, the patient also has sexual intercourse with women sex workers. Sexual intercourse is urogenital and genito-genitally without using condom. The last sexual intercourse was with his wife 13 years ago and with a female sex worker about 3 years ago. History of tattoos, smoking, alcohol, narcotics, psychotropic, other addictive substances consumption was denied.

Physical examination showed that the patient's general condition is good and compos mentis. Present and general status are within normal limits. Dermatology and venereology status, no skin lesions were found from all over the body (Figure 1A-E) and also no lesions were found in the external genitalia mucous (Figure 1G-G).

The laboratory results of complete blood routine, renal function tests, liver function tests, blood sugar levels are within normal limits. The titer result of VDRL was 1:16 and TPHA was 1:160. Based on anamnesis, physical and laboratory examination the patient was diagnosed with late latent syphilis and ocular syphilis. The patient was given three weekly interval dose of Benzathine Penicillin G 2.4 million international units intramuscularly. There is no Jarisch-Herxheimer reaction after treatment. For further observation, the patient was scheduled for VDRL titer observation at 1, 3, 6, 12 and 24 months.

The patient was consulted to the Neurology Department and no clinical manifestation was found to neurosyphilis. The patient also asked to the Voluntary Counseling and Testing (VCT) of Sanglah Hospital for screening Human Immunodeficiency Virus (HIV) and obtained non-reactive results.

One-month follow-up after the treatment, the patient's condition improved. Blurred vision in the right eye was reduced. There are no complaints of headache and hearing loss. There was a decrease of VDRL titer to 1:8.

## DISCUSSION

Syphilis is a sexually transmitted infection with a chronic course. Stage of syphilis is divided into early syphilis and latent syphilis. Early syphilis occurs within 1 year after primary infection, consist of primary syphilis, secondary syphilis and early latent syphilis. Latent syphilis occurs after 1 year from the appearance of primary lesions, consist of late latent syphilis and tertiary syphilis which includes neurosyphilis triad, cardiovascular syphilis and late benign syphilis or gummatous syphilis.<sup>1,2</sup>

By definition, a person diagnosed with latent syphilis when serological examination for reactive syphilis (high titers on nontreponemal and treponema serological tests), has never been treated and shows no clinical manifestations.<sup>1</sup> According to the Centers for Disease Control and Prevention (CDC), latent syphilis is divided into an early and late latent infection, which is 1 year after infection occurs. Patients who get infection 1 year after the initial lesion are categorized as early latent syphilis while those who get more than 1 year infection or if the duration of infection is unknown are categorized as late latent syphilis. The importance of distinguishing early latent and late latent because late latent infection requires a more extended period of treatment and people with early latent syphilis are considered more likely to transmit the disease through sexual contact.<sup>1,2,5</sup>

In this case, the patient had a history of multi-partner sexual and never used condom. The last sexual intercourse was 3 years ago with a female sex worker. The patient was never aware of the history of the wound on his genitalia. From the physical examination found no clinical manifestations of syphilis but serological test for syphilis was reactive with VDRL titer 1:16 and TPHA titer 1:160; so the patient was diagnosed with late latent syphilis.

Recent years have reported an increased incidence of ocular syphilis in developing countries. Ocular syphilis manifestation can be varied and also can occur at all stages of syphilis, including late



**Figure 1** No skin lesions were found from all over the body such as (A) head; (B) Chest; (C) Back; (D) Hand; (E): Feet; (F-G) Genitalia external

latent syphilis. Syphilis can affect all eye components including intra-ocular components such as the uvea.<sup>6</sup> There are two types of uveitis due to syphilis; first, anterior uveitis which is an unspecified type but most often occurs in syphilis patients with ocular involvement. Second, posterior uveitis which can be accompanied by vitritis, focal retinitis, chorioretinitis, retinal bleeding, papillitis, neuroretinitis and vascular occlusion.<sup>6,7</sup>

Ocular syphilis patients generally present with a chief complaint of blurred vision and can be accompanied by nonspecific symptoms such as red-eye, eye pain, and no response to steroid therapy. Ocular syphilis can be the only clinical manifestation of syphilis. Failure to make a diagnosis and delay in treatment lead to possible transmission of infection, poor visual prognosis (blindness) and neurological deficits resulting in neurosyphilis. Syphilis serological tests should be performed especially if ocular inflammation has an unusual characteristic of severe inflammation. After the diagnosis is established, all patients with ocular syphilis are recommended for a lumbar puncture to detect neurosyphilis.<sup>3,6,7</sup>

In accordance with guidelines from the Centers for Disease Controls and Preventions (CDC), the treatment is three weekly interval dose of Benzathine Penicillin G 2.4 million international units intramuscularly. These treatments are beneficial for intraocular inflammatory.<sup>1,3</sup> Topical steroids and mydriatics can be used as adjuvant treatment for anterior uveitis.<sup>6,7</sup>

In the elderly, there are various obstacles to sexual activity that can be divided into external obstacles that come from the environment and internal obstacles that come from the elderly themselves. But from the latest research shows that many elderly continue to do the sexual activity until a relatively advanced age.<sup>8</sup> The diagnosis of syphilis in the elderly is still a challenge because there is an increase in the prevalence of false positives and false negatives in serological tests for syphilis. In addition, the elderly generally have several other comorbidities so that the diagnosis of syphilis is often missed or misdiagnosed with other diseases.<sup>9</sup> The previous study from South Korea which assess the sexual behavior and sexually transmitted infection in the elderly population was also support the recent finding.<sup>10</sup>

## CONCLUSION

We reported a case of late latent syphilis accompanied by ocular syphilis in the elderly. There is no

difference in the diagnosis and management of syphilis in the elderly or the productive age group. One thing to be kept in mind and emphasized is that as long as a person is still sexually active, the risk of sexually transmitted infection remains, so old age is not a reason for the elderly not too aware their safety in sexual intercourse.

## CONFLICT OF INTEREST

There is no competing interest regarding the manuscript.

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## AUTHOR CONTRIBUTION

All of the authors are equally contributed to the study from finding particular cases, data gathering and reporting the results of the study.

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