

# A case of syphilitic vitritis with complicated course

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## Background

- Ocular syphilis is a group of inflammatory eye conditions resulting from infection of ocular tissues with *Treponema pallidum*. It can occur and overlap with any stage of syphilis infection, but eye involvement is most common in secondary syphilis and late syphilis<sup>1</sup>.
- It can present with different manifestations, with the most common being uveitis. However, it can also present as vitritis, retinitis, papillitis, keratitis, or acute retinal necrosis<sup>2</sup>.
- This case report describes a 49-year-old woman with bilateral vitritis due to syphilis infection.

Serology	Value	
	Syphilis	VDRL 1:256
HIV1/2	negative	
HSV-2	IgM +	IgG -
HSV-1	IgM -	IgG -
VZV	IgM -	IgG +
<i>Borrelia burgdorferi</i>	IgM -	IgG -
<i>Toxoplasma gondii</i>	IgM -	IgG -

- Brain magnetic resonance imaging (MRI) was negative for meningeal/cerebral involvement.
- Neurosyphilis with ocular involvement was confirmed, and targeted antibiotic therapy with intravenous benzylpenicillin at a dose of 24,000,000 IU every 24 hours for a total of 14 days was administered.
- Throughout the treatment period, the patient reported only a slight improvement in visual acuity and consequently underwent periodical ophthalmological examinations.
- Steroid therapy combined with acyclovir was initiated due to ocular poor improvement and suspicion of concomitant viral infection. At the end of antibiotic and antiviral therapy, improvement in vitritis and a slight reduction in papilledema occurred. This was associated with a partial improvement in ocular visual acuity, with the left eye at 6/10 and the right eye at 7/10.

## Case report

- A 49-year-old Caucasian female patient presented with bilateral hypovision, predominantly in the left eye, which had been ongoing for approximately 20 days. The patient has a history of well-controlled type I diabetes mellitus.
- An ophthalmic examination revealed bilateral vitritis with retinal necrosis and bilateral papillitis.
- Laboratory tests were performed, including serology for syphilis, Herpes simplex virus (HSV) 1-2, Varicella zoster virus (VZV), *Borrelia burgdorferi*, and *Toxoplasma gondii*.
- With the exception of her long-term partner, the patient denied engaging in high-risk sexual relationships. She denied any history of genital lesions, inguinal lymphadenopathy, or skin rash.

- A lumbar puncture (LP) was performed to rule out neurosyphilis. The cerebrospinal fluid (CSF) showed normal glycochorrhachia, mild hyperproteinorrachia, and a cell count of 31 cells with a predominance of lymphocytes. The VDRL was equal to 1:160, and the RPR was 1:32. The molecular search for herpes virus was negative.

	Value	
	White blood cells	31/mm <sup>3</sup>
Glucose	114 mg/dl	237 mg/dl (blood glucose)
Proteins	61 mg/dl	
Syphilis	VDRL 1:160	RPR 1:32
HSV 1 and 2 genome	negative	

## Conclusions

- Ocular syphilis may be misdiagnosed as other ocular diseases, particularly in the absence of risk factors.
- If there is suspicion, prompt initiation of antibiotics and diagnostic procedures are necessary, including LP and ophthalmological examination.
- Although most patients recover fully, delayed treatment can result in serious sequelae, such as visual acuity deficits.
- In the diagnostic process, it is crucial to exclude other eye diseases, such as herpetic infections, to improve the outcome.

## References

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