

# Atypical paronychia: don't forget herpesvirus

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## Abstract

Paronychia is usually caused by bacterial infections. Herpetic whitlow is an acute infection of the fingers or toes caused by herpes simplex viruses and it typically presents with vesicles. We report the case of a 78-year-old woman with gingivostomatitis and atypical paronychia in several fingers without blisters.

*Keywords: herpetic whitlow, herpes simplex virus*

## Introduction

Herpes simplex viruses (HSV) are enveloped deoxyribonucleic acid viruses responsible for mucocutaneous infections. Type 1 HSV is mainly transmitted by oral-to-oral contact. Initial infection usually occurs during childhood and may be asymptomatic or may cause gingivostomatitis. Type 2 HSV is usually sexually transmitted and commonly causes genital ulcers. Both types may present as oral or genital recurrences, especially in immunocompromised patients. Herpes simplex viruses may also affect the eye and cause hepatitis or meningoencephalitis. Herpetic whitlow is a rare manifestation of HSV infections that typically presents with vesicles [1-3]. We report a 78-year-old woman showing gingivostomatitis and atypical paronychia in several fingers without blisters.

## Case Synopsis

A 78-year-old woman with a history of hypertension was admitted to our department for acute fever, oral pain, and dysphagia, quickly followed by painful

inflammatory lesions of the fingers. She had no history of mouth lesions and did not mention blisters prior to onset of the finger lesions. She did admit to biting her fingernails. Her only treatment was valsartan. Clinical examination showed gingivostomatitis, infracentimetric cervical lymph nodes, and inflammatory ulcers along the nails of the left thumb (**Figure 1A**) and middle finger (**Figure 1B**) without any blisters. There was no organomegaly and no other lymphadenopathy. Standard blood tests showed: C-reactive protein 1.2mg/dL, normal white blood cells count, and no deficiency in B9, B12 vitamins, iron, and zinc. Human immunodeficiency virus and cytomegalovirus (CMV) serologies were negative. Epstein-Barr virus (EBV) serology showed positive anti-VCA immunoglobulin G, positive anti-EBNA immunoglobulin G, and positive anti-VCA immunoglobulin M. Epstein-Barr virus viral load was negative. Gastroscopy was unremarkable and we concluded that the patient suffered from odynophagia rather than dysphagia. We performed a polymerase chain reaction (PCR), (US4-HSV1 and US4-HSV2 sequences) on an oral swab that was highly positive for HSV1, which confirmed the diagnosis of primary herpetic gingivostomatitis with herpetic whitlow. The patient received a short antiviral therapy with valaciclovir and all lesions disappeared within one month.

## Case Discussion

Herpetic whitlow is a well-described but rare manifestation of HSV infection with an incidence of 2.5 cases per 100,000 people per year. Transmission occurs through direct contact with mouth or genital lesions, which was the case for our patient who



**Figure 1. A)** Inflammatory ulcer along the nail of the left thumb without any blister. **B)** Inflammatory ulcer along the nail of the left middle finger without any blister.

reported biting her nails. Infection usually occurs two to 20 days after exposure. It typically presents with

erythema, edema, vesicles, and severe pain, usually along the nail or the pulp of the distal phalanx, which makes diagnosis easy [3]. However, when paronychia is atypical or shows multiple or bilateral lesions of the fingers, one must question a diagnosis of bacterial paronychia and microbiology may help.

Viral culture of vesicles or HSV serology can be performed but PCR is the most sensitive technique. Cross-reactivity with other herpesviruses is well-known. Indeed, it has been shown that both CMV and EBV code for proteins that cross-reacted with HSV2 glycoprotein G (also named US4), [4]. In our case, the oral swab confirmed HSV-1 infection.

It is important to clearly identify viral paronychia since its treatment differs completely from bacterial paronychia. Therapy is based on painkillers and sometimes antiviral treatment that can reduce the duration of the disease. Antibiotics are ineffective. Resolution may take two to four weeks [3,5].

## Conclusion

Herpetic whitlow is a rare manifestation of HSV infections. Our case highlights that in the presence of atypical paronychia such as multiple or bilateral lesions, the physician should consider viral infections.

## Potential conflicts of interest

The authors declare no conflicts of interests.

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