



Herpetic Whitlow: A Brief Review

¹Dr. Shreya Arora, ²Dr. Puja Bansal, ³Dr. Deepak Bhargava

¹Intern, ²Professor, ³HOD, Professor

^{1,2,3}School of Dental Sciences, Sharda University, Greater Noida

ABSTRACT

Herpetic Whitlow is a distal phalanx infection caused by the herpes simplex virus. Pain, erythema, swelling, and the development of non-purulent vesicles are its defining features. Following direct inoculation (exogenous or autogenous) or the reactivation of a latent virus, heretic whitlow develops. Young adults between the ages of 20 and 30 and children under the age of 10 are both affected by the disease, which has a bimodal age distribution. By using the Tzanck test and culture, the diagnosis of herpetic whitlow is easily verified. Herpetic whitlow should be distinguished from bacterial felon or paronychia because it is a self-limiting infection for which surgical incision is not recommended.

INTRODUCTION

Herpes simplex virus types 1 and 2 (HSV-1 and HSV-2) infection of the fingers known as herpetic Whitlow is characterised by painful, erythematous, and nonpurulent lesions that typically involve the distal phalanx.[1] It is a cutaneous infection of the fingers or toes, which was first described in 1909. The word is taken from the Scandinavian word which-flaw (which refers to the sensitive area around the nail, flaw means crack).[2] It is widespread and most frequently spreads through direct physical contact in young children.[3] It also affects medical personnel who come into touch with the oral cavity or secretions from the nasopharynx and mouth, including dentists, anaesthesiologist's, and medical personnel, particularly those working in intensive care units.

EPIDEMIOLOGY

Healthcare workers who come into contact with contaminated mucous membranes or secretions are likely most commonly affected by herpetic whitlow; however, since the adoption of universal precautions, the frequency has decreased and occupation-related cases no longer make up the bulk of occurrences.[4,5] Most cases of herpetic whitlow affect people between the ages of 20 and 30, and the lesions are typically self-inoculated from HSV-2 genital lesions. The next most affected age group, with autinoculated lesions from HSV-1 gingivostomatitis, is children under 10 years old.[4] Within the first two years of life, the paediatric population experiences the greatest age of occurrence.[6]

CLINICAL CHARACTERISTICS

Herpetic whitlow most frequently affects the finger pulp, but it can also affect the sides and paronychial areas of the finger. There have even been cases that have affected the toes.[2] Primary herpetic whitlow lesions are significantly more inflamed and persistent. The distal phalanx of the finger experiences discomfort, tingling, and/or burning as the first sign. This frequently occurs following exposure and an incubation period of 2–7 days. This pain is usually followed over the next 7 to 10 days by swelling, erythema, and the growth of many 1-3 mm vesicles upon an erythematous base.

The vesicles crust over and heal 10 to 14 days after the onset of pain and swelling. Peeling and the emergence of normal skin appear next. It is assumed that at this point, viral shedding stops. Herpetic whitlow has sometimes been linked to fever, aches, lymphangitis, and lymphadenitis. It is a self-limiting infection which typically goes away in two to three weeks. A secondary bacterial infection may lengthen the course of the infection if the vesicles are ruptured and the digital pulp space is violated.

Recurrence has been reported in anywhere between 30 and 50% of infected people, though this varies. Prodromal symptoms of pain, paresthesia, and/or hypersensitivity at the infection site are related to recurrences.[7]

Herpetic whitlow's recurrence, like other herpes Simplex virus infections, shows that the illness likely lasts a lifetime.[8]

DIAGNOSIS

It is generally based on the clinical appearance of vesicles on the fingers or toes that are excruciatingly painful.[6] The Tzanck test, viral culture, or DNA amplification procedures can be used to demonstrate conclusive evidence of HSV infection in the affected area, which is necessary for the diagnosis to be confirmed.[9]

Multinucleated large cells with a focus on HSV-1, HSV-2, and varicellovirus are indicative of a positive Tzanck test. With the help of a needle puncture, fluid from the vesicle is collected for use in viral culture and DNA amplification procedures.[5]

TREATMENT

The first step is to recognise herpetic whitlow. It is mostly treated symptomatically.[7] Managing discomfort, lowering the likelihood of transmission, and taking antiviral drugs into mind are key components of herpetic whitlow therapy.

The normal course of primary herpetic whitlow is self-limited and ends in 21 days. For patients with recurrent lesions or symptoms that have persisted for less than 48 hours, or for immunocompromised patients who have the risk of developing disseminated disease and necessitating intravenous antiviral therapy and critical care, off-label use of oral antivirals should be taken into consideration. [10] Valacyclovir (Valtrex), famciclovir (Famvir), or acyclovir (Zovirax) may decrease the severity of infection, although randomised controlled trials have not been carried out. [11]

Contact with the epidermal lesion should be avoided by keeping the affected digit covered with a dry bandage since viral shedding persists until the lesion is healed. Viremia or a bacterial infection may result from the lesion's drainage and incision. Patients should be informed that while the initial infection is frequently the most severe, it does reoccur 30 to 50 percent of the time. If started during the prodromal stage, treatment for recurring herpetic whitlow may be effective.[9]

PROGNOSIS

Herpetic whitlow is typically self-limited and resolves after the initial infection in 2 to 4 weeks. [10] The discomfort lessens and the vesicles start to dry and crust after the acute period. The pain usually goes away in approximately 14 days, and the remaining skin alterations keep healing after that. Although there have been cases of persistent scarring, numbness, and hypersensitivity, fingers and nails normally recover fully without any further problems. [12]

PREVENTION

The identification of active herpetic lesions on patients, the identification of medical personnel with active herpetic lesions, and the use of gloves whenever handling respiratory or oral secretions are important aspects of its prevention.[13] Since an active lesion contains an infectious virus, medical professionals should refrain from direct patient contact until the lesion has dried. [14] The healthcare professional can resume direct patient care if gloves are worn once the lesion crusts over. [15]

Patients who are immunosuppressed or who are at a high risk for herpetic infections, such as newborns, expectant mothers, burn patients, or transplant recipients, should not be handled by infected personnel. [16]

COMPLICATIONS

Herpetic Whitlow is frequently mistaken for a felon or bacterial paronychia. This could lead to procedures that raise the danger of bacterial superinfection, systemic infection, and possibly even the emergence of herpes encephalitis. In addition, there are other issues include scarring, hypersensitivity, numbness, ocular spread, and recurrent infections. [3]

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