Herpetic Whitlow: A Case Report

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Herpetic whitlow, a condition in which the herpes simplex virus (HSV) affects the digits, was first described in 1909.[1] Although uncommon, it is considered to be an occupational hazard for health care workers.[2,3] The number of yearly cases is estimated to be 2.4 to 5.0 per 100,000 population.[4]

Clinical symptoms include pain or burning of the affected extremity, followed by the appearance of nonpurulent vesicles, with swelling and erythema of the affected digit. Palpable and tender axillary and epitrochlear nodes and an erythematous streak over the forearm may also be present.[3,5] An unusual case of herpetic whitlow that involved the forearm and hand of a young woman is described below.

Case Report

A 23-year-old white woman came to the Jefferson Family Medicine office complaining of a pruritic vesicular rash on the proximal extensor surface of the third digit of her left hand. The patient reported that 3 days before her visit, she had experienced a burning pain down the dorsal aspect of her left forearm, which disappeared with the vesicular outbreak. She stated that this pattern of burning on the forearm, followed by the vesicular outbreak, first occurred approximately 1 year ago and had recurred every 2 to 3 months. The patient said that she was currently experiencing her fourth outbreak. There was no history of skin trauma, and she denied any history of genital or cutaneous herpetic lesions. She stated that she had not been sexually active for the previous 1½ years and denied any sexual contact with HIV-infected partners. The patient was employed as a paralegal and denied specific occupational risks for herpetic infection.

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Examination of this otherwise healthy-appearing woman revealed five or six vesicles, each approximately 0.5 cm in diameter, located between the proximal and distal interphalangeal joints on the extensor surface of the third digit of the left hand. The area over the vesicles was slightly erythematous. The dorsal aspect of her left forearm was nontender and nonerythematous. The patient had no palpable axillary lymph nodes.

Two of the vesicles were carefully lanced with a sterile needle, exposing clear fluid. The fluid was cultured and was subsequently found positive for HSV.

Discussion

Herpes simplex virus infections, which are common to genital and gingival areas, rarely occur elsewhere on the skin. Herpetic whitlow, an HSV-1 or HSV-2 infection on the digits of the hand, occurs by direct inoculation through a break in the epidermis. The incubation period varies from 2 to 20 days. Usually only one finger is infected, most commonly the thumb or the first or second digit.[3,4,6–8]

The primary infection is usually the most severe. Recurrent infections, which occur in 20% to 50% of cases, usually have milder symptoms and a shorter duration. Initially, pain, tingling, and burning of the distal phalanx may be seen. This has been associated with prodromal fever and malaise. Axillary and epitrochlear adenopathy along with a red streak on the forearm may also occur. This is followed by swelling, erythema of the digit, and the appearance of vesicles. The vesicles remain for about 10 days and are followed by crusting. The pain may last for up to 2 weeks.[2,3,5]

Herpetic whitlow is seen in both children and adults. The affected adult population has an overall female predominance, while the pediatric male and female populations are relatively evenly affected. In children, herpetic whitlow usually follows autoinoculation from primary herpetic gingivostomatitis. In adults, autogenous or exogenous inoculation from gingivostomatitis,

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genital herpes, and oral secretions is seen. Herpes simplex virus has been found in the saliva of 2.5% of asymptomatic adults and in the bronchial secretions of 6.5% of hospitalized patients who have had tracheostomies. Health care workers are therefore said to be at a higher risk for infection.[3,5,6,8]

The differential diagnosis of herpetic whitlow includes other bullous infections that can affect the hand such as contact dermatitis and bacterial cellulitis. Recognition of herpetic whitlow is particularly important to prevent iatrogenic complications associated with incision, drainage, and systemic antibiotic use.[9]

The treatment of herpetic whitlow is controversial. Originally, treatment was limited to supportive care; sterile dry dressings were applied to the infected area to decrease the possibility of spread, and analgesics were administered for pain. Current treatment focuses on suppression of the latent virus. Acyclovir, administered orally,[10,11] idoxuridine, administered iontophoretically,[7] and large oral doses of L-lysine[12] have been used with varied success. The infection is usually self-limiting and usually resolves without scarring. Thirty percent to 50% of patients have hypersensitivity and numbness over the previously affected digit between recurrent episodes. Other complications are scarring, systemic viremia, and secondary ocular involvement.[3,5,8]

Key words. Herpes simplex; forearm; hand; fingers.

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