CLINICAL VIGNETTE

Herpetic Whitlow

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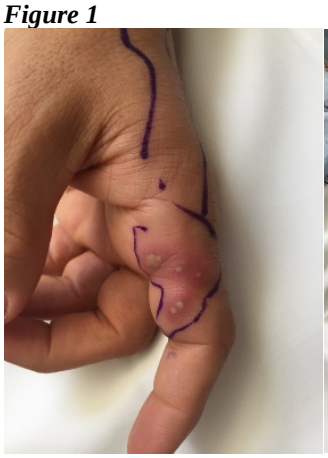
A 46-year-old male presented to the Emergency Department complaining of a non-pruritic, erythematous rash of his left hand. It began approximately 48 hours prior to admission as painful, erythematous punctate lesions of the proximal phalanx which evolved to grey/yellow filled pustules with proximal surrounding spreading erythema. He denied fevers, chills, sweats, tingling, numbness, antecedent trauma, bites, exposures, or recent gardening. He was given single doses of parenteral Vancomycin and Clindamycin and discharged home with oral Cephalexin and Trimethoprim-Sulfamethoxazole. Over the next 24 hours, he developed lymphangitic streaking and represented to the Emergency Department and was started on Vancomycin and Piperacillin/Tazobactam.

On further questioning the patient reports a similar infection in the exact same location on three previous occasions over the last three years. He was told that these were likely due to gram-negative infections. On each Emergency Department visit, he would receive a dose of intravenous antibiotics followed by a course of oral antibiotics. The rash would typically resolve without sequelae within two weeks of presentation. He denied prior arthrocentesis or any joint space infection of the hand which required surgical drainage.

On exam, the proximal phalanx of the left forefinger had multiple 2-3mm grey/yellow pustules on discrete erythematous macules (Figure 1). There was no erythema overlying the joints, no induration, and the surrounding compartments were soft. He had full range of motion of the distal interphalangeal, proximal interphalangeal, and metacarpophalangeal joints without evidence of tenosynovitis. There was lymphangitic streaking present to the elbow with two mildly enlarged non-tender, mobile axillary lymph nodes (Figure 2).

The patient was admitted and antibiotics were continued. Due to the high suspicion for herpetic whitlow, Dermatology was consulted for biopsy, and he was started on Valacyclovir. He was discharged 24 hours later on Valacylovir and Levofloxacin, due to his history of gram negative infections and the possibility of supra-infection. Skin biopsy was negative for bacteria and positive for HSV-2. The patient was told to discontinue antibiotics and to continue Valacylovir. He was counseled that the virus was highly contagious when lesions were present and there is a possibility that shedding could occur between outbreaks.

Figure 1 ***Figure 2***



Discussion

Epidemiologically, the populations at risk for herpetic whitlow are young children due to oral-digital inoculation from thumb-sucking, young adults due to concurrent genital herpes and healthcare/dental workers who are exposed to the oral cavities of patients.[1-3] Herpetic whitlow can rarely occur as an isolated primary infection.[4] The typical epidemiology describes Herpes Simplex Virus 1 (HSV 1) in the pediatric population with concurrent primary herpes oro-labialis and HSV 2 herpetic whitlow in the adult population who also commonly has latent genital herpes. Older adults such as our patient can get recurrent infections or HSV 1 or 2.[5,6]

Herpetic whitlow usually presents as a manifestation of a recurrent infection. By history, our patient denied any prior herpes infections of the oral or genital areas, so it seems that the initial presentation 3 years ago may have either been a primary herpetic whitlow or latent genital herpes. In the setting of recurrent herpetic whitlow, it is imperative to test for HIV, which was negative in our patient. HSV can become a disseminated infection in immunocompromised hosts.[6]

The natural history of most herpetic whitlows is self-resolution within 2-3 weeks.[2] Our patient was previously treated as a superficial bacterial cellulitis. Very often, herpetic whitlow can get superinfected with bacterial pathogens and become a secondary cellulitis. Once we confirmed the diagnosis through skin biopsy with viral PCR and saw rapid clinical improvement

we felt confident in discontinuation of antibiotics. The current best management strategies of herpetic whitlow and other muco-cutaneous manifestations of HSV 1 or 2 include oral acyclovir, valacyclovir or topical acyclovir to speed the resolution of lesions.[3]

This case represents an interesting example of premature closure compounded by anchoring on a previous diagnosis. Based on the patient's reported history, the assumption was that the patient had recurrent, episodic cellulitis of the left hand; however, upon reviewing the history and elucidating further history, the recurrence pattern, time to resolution, location and physical exam all pointed to herpetic whitlow. It is imperative to think of herpes infections especially in the setting of frequent recurrence, as in this patient's case. Ultimately, this altered the treatment plan for the patient and allowed expectations to be set for future outbreaks and treatment.

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