Consultant360 Multidisciplinary Medical Information Network

WHAT'S YOUR DIAGNOSIS?

PEER REVIEWED

What Is Causing This Woman's Swollen, Red, and Tingling Finger?

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A 60-year-old woman presented to the emergency department (ED) with a 2-week history of swelling, rash, and a tingling sensation in her left middle finger. The symptoms had begun after she had removed a splinter from the tip of that finger a few days after having worked in her garden. Several days after the splinter's removal, she had begun to experience constant aching pain the finger, radiating to her hand and forearm, with subsequent mild progressive swelling and a lacy rash. These symptoms did not improve with the use of over-the-counter triple antibiotic ointment or warm soaks, prompting her to come to the ED.

The patient denied having fever, chills, nausea, vomiting, diarrhea, or numbness, but she did report having myalgias, arthralgias, swelling, color change, and tingling in the finger. She had a history of irritable bowel syndrome, low back pain, and radiation exposure, as well as a remote history of basal cell carcinoma of the face, which had been surgically excised.

Physical examination findings were notable only for an old, well-healed puncture wound to the ulnar aspect of the volar fat pad of the distal long digit without obvious foreign body; a mottled, erythematous, lacy rash; and mild swelling of the entire digit extending to the metacarpophalangeal joint (**Figure 1**). The long digit was held in a flexed position, but she did not have any limitation in range of motion (**Figure 2**). Capillary refill was normal, and there was no notable lymphangitic streaking. Otherwise, she appeared well, with normal vital signs.

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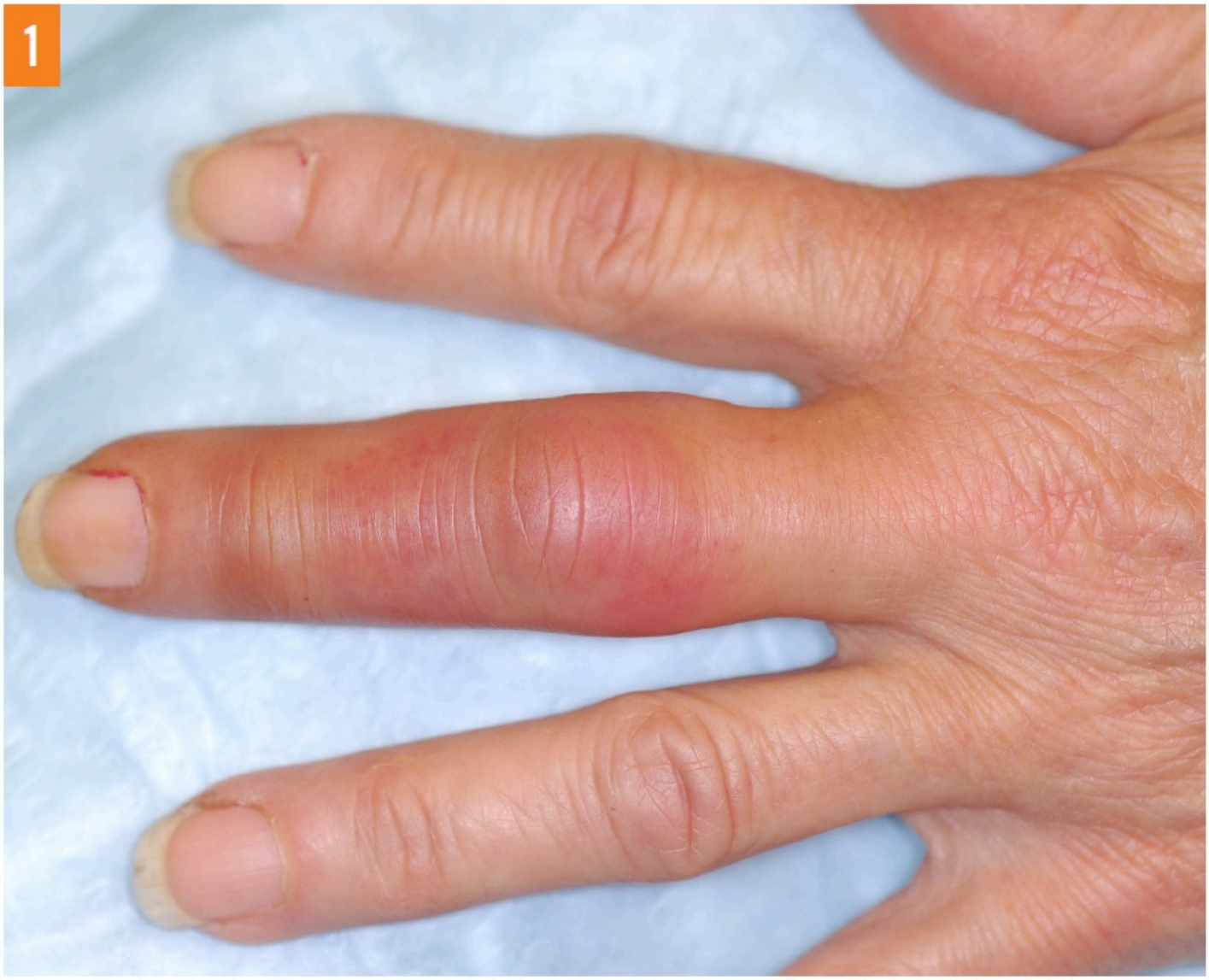

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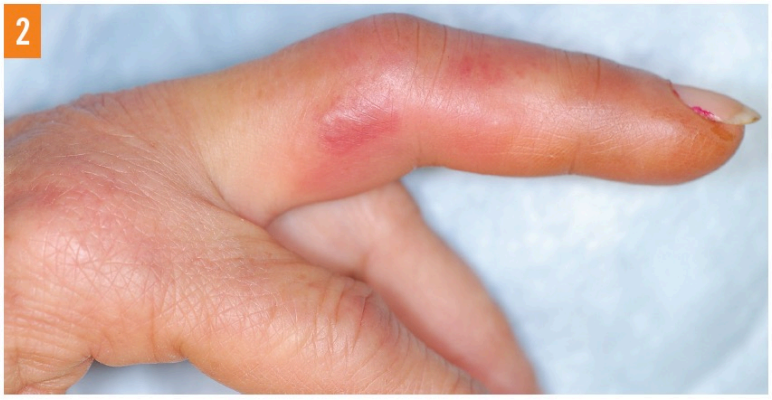

What's your diagnosis?

A. Flexor tenosynovitis

B. Cellulitis

C. Deep vein thrombosis

D. Sporotrichosis

E. Congestive heart failure

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Answer: Sporotrichosis

The differential diagnosis for digital swelling is extensive and can be clinically daunting. Possible etiologies include local injuries such as fractures, tendon injuries, and contusions; infections; and systemic processes such as congestive heart failure (CHF), lymphedema, and rheumatoid arthritis.

In this patient's case, it is fairly simple to exclude the macro causes of digital swelling (eg, CHF, kidney failure, liver failure, deep vein thrombosis), since they rarely if ever result in edema of a single digit. The woman's age and demographics make sickle cell disease unlikely. This leaves the discerning clinician with a number of can't-miss diagnoses, including fracture, flexor tenosynovitis, and cellulitis. Without deformity, bony tenderness, or an identifiable mechanism, fracture is far less likely. The lack of Kanavel signs in this patient's case does not support a diagnosis of flexor tenosynovitis. The process of elimination leaves us with cellulitis; however, the physical findings and clinical history are not exactly congruent with this selection. As with so many cases, the determining factor here is the clinical history. Gardening is the key.

This patient had sporotrichosis, a fungal infection caused by the saprophytic fungus *Sporothrix schenckii*.

DISCUSSION

Occurring in several forms, sporotrichosis is most commonly seen in its cutaneous variety; the pulmonary and disseminated forms typically are discovered only in immunocompromised persons.[1,2] The classic clinical course is indolent, with the development of a red, pink, or purple nodule at the site of skin inoculation or trauma (often the prick of a thorn) within 1 to 12 weeks of exposure and subsequent spreading proximally along lymphatic channels.[1-3] Sporotrichosis can also occur in a fixed cutaneous form, as it did in this patient's case,

manifesting as a violaceous, reticular rash extending from a nonhealing, painless plaque (the puncture wound).[2,4] Lymphangitic spread and satellite lesions will not be seen in such cases.[2]

Sporotrichosis is quite rare in the United States, with an annual incidence of only 1 case per million population.[2,3] The diagnosis is usually made on a clinical basis alone, but the gold standard method is tissue biopsy and culture.[2-4]

Risk factors include gardening, landscaping, farming, berry-picking, horticulture, and carpentry.[2] Preventive measures include wearing protective gloves, long sleeves, and long pants, especially during such higher-risk activities.[2,3] Sporotrichosis is not contagious.[3]

The treatment of choice is an extended course of itraconazole.[1-4] Alternative treatments include itraconazole at an increased dosage, terbinafine, or simply applying external heat, since *S schenckii* grows best at 35°C.[1,2] External heat is the preferred treatment in pregnant women, unless the infection is severe or disseminated.[1] Amphotericin B is the treatment of choice in cases of disseminated infections.[1-4] Spontaneous resolution of sporotrichosis is rare.[1]

OUTCOME OF THE CASE

The patient was started on itraconazole and was scheduled for a next-day follow-up appointment in the plastic surgery hand clinic. At that visit the following day, she reported having developed palpitations, which were attributed to the new medication. Itraconazole was stopped, cephalexin was initiated, and she was referred to the infectious disease clinic the next day, at which time terbinafine was initiated.

Several months later, at a visit to her primary care provider, she reported complete resolution of symptoms of sporotrichosis.

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