A 6-Year-Old Boy with a Nodule on His Hand

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A 6-year-old boy was referred to our clinic with erythema and multiple nodules dorsum of the right hand and forearm. As we learned from the history of the patient, he first developed an erythema due to a thorn prick to the third finger on his right hand while playing. A single nodule appeared on the dorsum of the right hand 2 weeks later. After 1 month, multiple nodules developed in a linear distribution toward the right axillary.

On examination, the appearance of the lesions was mildly ulcerative, and papillomatous growth toward the right axillary was seen (see Figure 1). A few axillary lymph nodes were found. Systemic examination was normal. Routine blood parameters, PPD, and immunoglobulin values were normal. An HIV test was negative.

Microscopic examination of the nodule on the dorsum of the right hand with potassium hydroxide (KOH) stain, Gram’s stain, and acid fast bacteria (AFB) stain were negative and the sample was sent for culture. Skin biopsy showed several round-to-oval bodies, and one round body in the center along with chronic inflammatory cells.

Culture on Sabouraud dextrose agar showed the growth of multiple fungal colonies that were grayish-black. Skin biopsy with periodic acid-Schiff (PAS) stain showed several round to oval spores of Sporothrix schenckii. One spore located in the center showed single budding along with chronic inflammatory cells.

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Editor’s note: Each month, this department features a discussion of an unusual diagnosis in genetics, radiology, or dermatology. A description and images are presented, followed by the diagnosis and an explanation of how the diagnosis was determined. Your comments are welcome via email at Pediatrics@Healio.com.
Diagnosis: Lymphocutaneous Sporotrichosis

The diagnosis of lymphocutaneous sporotrichosis was made and the patient was put on itraconazole at a dose of 100 mg daily. After 1 month, the lesions had almost disappeared.

DISCUSSION

Sporotrichosis is a rapidly developing subcutaneous or systemic fungal infection caused by \( S. \text{schenckii} \). It can develop in both animals and humans. Contamination with the organism is caused most often by a thorn prick to the skin. It seen most frequently in places with a temperate climate.\(^1\)

The first case was reported by Schenk in 1898.\(^2\) Sporotrichosis usually appears as a single case. However, epidemic cases have been documented in the literature. For example, 84 patients contracted sporotrichosis in the United States in 1988, and 3,000 patients contracted sporotrichosis in Africa in 1940.\(^2\)

Sporotrichosis can be seen in all age groups and across both genders. Alcoholism, malnutrition, and cellular immune deficiency are predisposing factors for sporotrichosis.\(^2\)

Sporotrichosis can appear in cutaneous and extracutaneous forms. The clinical forms of cutaneous sporotrichosis are the lymphocutaneous and fixed cutaneous forms. The present case was of the lymphocutaneous type. At first appearance, subcutaneous nodules develop in injured area, then ulceration and abscess formation occurs. This lesion is called “sporotrichoid chancroid.” The satellite lesions can be seen in the line of lymph node traces. The same clinical features were seen in our case.\(^1,3\)

Sometimes, the culture may be negative and biopsy is nonspecific;\(^4\) however, in our patient, both tests confirmed a diagnosis of sporotrichosis. Potassium iodide is extremely effective in localized forms and should be continued for 3 to 4 weeks after clinical cure. Itraconazole at 100 mg to 200 mg per day is effective in both cutaneous and systemic cases.\(^4,6\)

REFERENCES