

Photo Quiz

Ankle Pain and Rash

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FIGURE 1



FIGURE 2



A 28-year-old man presented with multiple skin lesions and a painful swollen right ankle. He had first noticed a purulent blister on his right knee about two weeks earlier. This lasted for several days, and then similar skin lesions developed on his left leg, the bilateral palmar surfaces of his hands, and the plantar surfaces of his feet. Right ankle pain also began about two weeks earlier and improved enough to permit partial weight-bearing. The patient had a cough and subjective fevers lasting for 48 hours but no other symptoms, including oral or genital lesions, vision changes, eye pain, pain with urination, or penile discharge. He denied history of sexually transmitted infections or new sexual contacts.

On physical examination, his vital signs were normal. A painful papular lesion with central ulceration was noted on his right knee (*Figure 1*). Pustules were present on his left palm (*Figure 2*) and left posterior leg, with tender subcutaneous red nodules on the sole of his left foot. The lesions

were 5 to 10 mm in diameter, were nonblanchable, and had no purulence or bleeding. No lesions were noted on his tongue, gums, or soft or hard palate. His right foot was slightly swollen but showed no ecchymosis, erythema, or fluctuance. He had tenderness over the lateral subtalar joint and along the midfoot.

Question

Based on the patient's history and physical examination findings, which one of the following is the most likely diagnosis?

- ☐ A. Disseminated gonorrhea.
- ☐ B. Mpox (monkeypox).
- ☐ C. Reactive arthritis.
- ☐ D. Rocky Mountain spotted fever.
- ☐ E. Secondary syphilis.

See the following page for discussion.

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A collection of Photo Quiz published in *AFP* is available at <https://www.aafp.org/afp/photoquiz>.

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SUMMARY TABLE

Condition	Characteristics
Disseminated gonorrhea	Triad of tenosynovitis, dermatitis, and polyarthralgia; cutaneous lesions on the dorsal surfaces of distal extremities, usually two to 10 papules or pustules on a purpuric base with areas of necrosis
Mpox (monkeypox)	Lesions progress through four stages (macular, papular, vesicular, and pustular) before scabbing over and desquamating; involves the genitals, face, chest, hands, and feet
Reactive arthritis	Arthritis or tenosynovitis with urethritis and ocular symptoms; less commonly associated with rash resembling pustular psoriasis
Rocky Mountain spotted fever	Blanchable, erythematous, maculopapular rash that ultimately transitions to petechiae; rash preceded by fever, fatigue, headache, myalgia or arthralgia, and nausea
Secondary syphilis	Primary chancre lesion transitioning into a diffuse, symmetrical, maculopapular eruption on the trunk, extremities, palms, and soles

Discussion

The answer is A: disseminated gonorrhea, which represents nearly 3% of all primary gonorrheal infections. It commonly presents as a triad of tenosynovitis, dermatitis, and polyarthralgia about two weeks after the initial infection. Cutaneous lesions develop on the dorsal surfaces of distal extremities in up to 75% of cases, usually two to 10 papules or pustules on a purpuric base with areas of necrosis.¹

Definitive diagnosis requires testing blood, joint aspirate, or skin lesions for *Neisseria gonorrhoeae*. Other mucosal surfaces, such as urogenital, rectal, or pharyngeal areas, may be tested based on sexual history. Testing for other sexually transmitted infections is recommended for patients with disseminated gonorrhea. Presumptive treatment of chlamydia should be initiated unless coinfection can be excluded by laboratory testing at the time of diagnosis. Initial management includes parenteral therapy with ceftriaxone, 1 g intravenously (or intramuscularly if necessary) every 24 hours for at least seven days.²

Mpox (monkeypox) can present with a rash similar to disseminated gonorrhea, often around the genitals but also on the face, chest, hands, and feet. Lesions progress through four stages (macular, papular, vesicular, and pustular) before scabbing over and desquamating.³ The rash is preceded by fever, lymphadenopathy, and fatigue. Mpox is spread through close contact, and up to 98% of cases from the 2022 outbreak were among men who have sex with men.⁴ Patients are considered contagious until lesions have fully healed, usually two to four weeks.

Reactive arthritis is a form of spondyloarthropathy following a distinct primary infection, most commonly of

gastrointestinal and urogenital origin. Patients typically present with arthritis or tenosynovitis, urethritis, and ocular symptoms about one to four weeks after the inciting infection. Cutaneous lesions (keratoderma blennorrhagicum) are much less common and more closely resemble pustular psoriasis. A characteristic difference from disseminated gonorrhea is ocular involvement, such as conjunctivitis and less often anterior uveitis or episcleritis.⁵

Rocky Mountain spotted fever is a potentially fatal tickborne infection caused by *Rickettsia rickettsii*. The disease has a seasonal variation, with most cases occurring in the spring and early summer. It presents with nonspecific signs and symptoms such as fever, fatigue, headache, myalgia or arthralgia, and nausea. A blanchable, erythematous, maculopapular rash that ultimately transitions to petechiae occurs in nearly 90% of patients, typically several days after primary symptom onset.⁶

Secondary syphilis can mimic disseminated gonorrhea, with a primary chancre lesion transitioning into a diffuse, symmetrical, maculopapular eruption on the trunk, extremities, palms, and soles. Other characteristics of this stage of syphilis include moth-eaten alopecia, liver or kidney involvement, and ocular or otic infection. After treatment for early syphilis, serologic testing should be repeated at six and 12 months. Treatment failure is defined as recurrent or persistent symptoms or a sustained fourfold increase in nontreponemal test titers.⁷

The opinions and assertions contained herein are the private views of the authors and are not to be construed as official or reflecting the views of the U.S. Navy, the U.S. Department of Defense, or the U.S. government.

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