Painful Nodular Lesions over the Hands

Introduction

A 27-year-old woman present with a 3-day history of painful lesions over her fingertips associated with a right wrist swelling, yellowish vaginal discharge and fever. Her past medical history was unremarkable. Physical examination revealed haemorrhagic pustules over the left thumb, left middle finger (Fig. 1), as well as tender linear erythematous patches overlying the lateral extensor tendons of the right wrist and flexor tendons of the right elbow (Fig. 2). A speculum examination showed copious amounts of yellowish discharge. The cardiovascular examination was essentially normal with no splinter haemorrhages or clubbing seen.

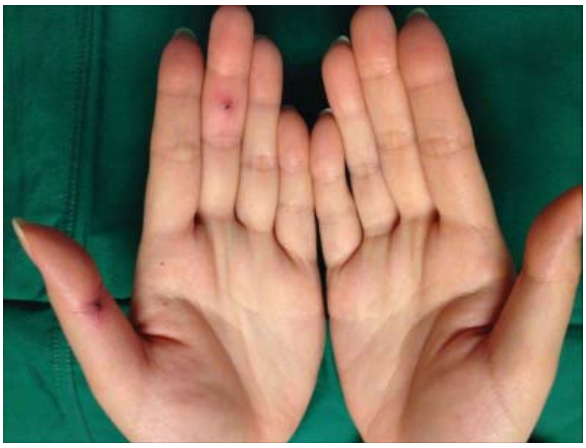

Fig. 1. Haemorrhagic pustules over the left thumb and left middle finger.

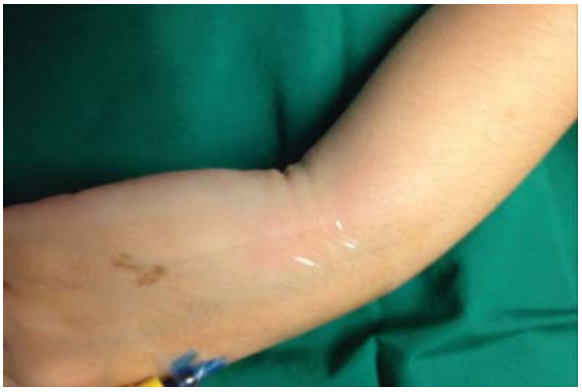

Fig. 2. Linear non-scaly erythematous patch overlying the flexor tendons of the right elbow.

What is the diagnosis?

A. Infective endocarditis
B. Disseminated gonococcal infection
C. Meningococcemia
D. Rocky mountain spotted fever
E. Hand, foot and mouth disease

Discussion

Laboratory studies showed an elevated total white cell count, along with a raised C-reactive protein and erythrocyte sedimentation rate. Radiographs of the right wrist were normal and 3 sets of blood cultures were all negative for any bacterial growth. Aerobic and Neisseria gonorrhea cultures from a biopsy taken from the thumb pustule grew no bacteria, but endocervical cultures were positive for Neisseria gonorrhea. A diagnosis of disseminated gonococcal infection was made and she was treated with 5 days of intravenous ceftriaxone. A stat dose of azithromycin was also given to cover empirically for any concomitant chlamydia infection. The rest of the sexually transmitted diseases screen later returned negative and the patient improved with resolution of cutaneous lesions and symptoms in 3 days.

Disseminated gonococcal infection occurs in 0.5% to 3% of patients with gonorrhea,[1] and women are affected 3 to 4 times more often than men. Disseminated gonococcal infection may present either as an "arthritis-dermatitis syndrome", or as a purulent arthritis.[2] The arthritis-dermatitis syndrome which occurred in our patient, is a triad of migratory asymmetric polyarthralgias, tenosynovitis, and dermatitis without a purulent arthritis[2] which is attributed to circulating immune complexes. Dermatitis is found in 75% of patients[2] and occurs most commonly over the extremities as red papules and petechiae, which develop into discreet pustules with an erythematous base. These lesions subsequently become necrotic and haemorrhagic. Concomitant fever, chills and malaise also occur. Other rare complications include infective endocarditis, perihepatitis, osteomyelitis and meningitis.

Investigations for disseminated gonococcal infection include 3 sets of blood cultures (which are positive in up to only 30% to 40% of patients). As asymptomatic genital

Answer: B

infection with gonorrhoea is commonly associated with disseminated gonococcal infection, a patient who presents with the typical clinical presentation of disseminated gonococcal infection should have all potentially infected mucosal sites swabbed and sent for gonococcal cultures. Biopsies of skin lesions may also be taken and sent for gonoccocal cultures. This is however infrequently positive.

The cornerstone of effective treatment of disseminated gonococcal infection is the use of appropriate intravenous antibiotics such as ceftriaxone or spectinomycin. Patients with the arthritis-dermatitis syndrome should be treated with intravenous antibiotics for at least 3 days, or until 24 to 48 hours after symptomatic improvement begins. Dramatic improvement is often seen within 24 to 48 hours of initiating antibiotic treatment. These patients may subsequently be converted to oral antibiotics with the total duration of antibiotic therapy being 1 week. All patients treated for DGI should also be empirically treated for chlamydia.[3] As the choice of antibiotics is often guided by local antibiotic resistance pattern, it is essential for the physician to refer to updated treatment guidelines when treating a patient with disseminated gonococcal infection.[4,5] As with uncomplicated gonococcal infections, sexual contacts of the patient in the preceding 60 days should be traced, screened and treated on epidemiologic grounds.

REFERENCES

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