Images in cardiovascular medicine. An unusual cause of hand cellulitis

RIGHINI, Marc Philip, et al.

DOI: 10.1161/CIRCULATIONAHA.106.658609
PMID: 17283272
An Unusual Cause of Hand Cellulitis
Marc Righini, Salah Gueddi, Sophia Taylor, Vincent Ott, Dominique della Santa, Jean-Yves Beaulieu and Henri Bounameaux

Circulation. 2007;115:e65-e66
doi: 10.1161/CIRCULATIONAHA.106.658609
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2007 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/115/5/e65
In August 2005, a 64-year-old white man presented with swelling of his left hand. There was no history of local trauma, local wound, fever, or systemic symptoms. He was first diagnosed as having cellulitis of the hand and was empirically treated with intravenous ceftriaxone for 3 days. Despite this treatment, the local status worsened, and the patient was transferred to our institution. He was also known to have mild hypertension, hypercholesterolemia, moderate dilated cardiopathy, and moderate aortic regurgitation. On admission, he complained of increasing pain and swelling of the left hand (Figure). Blood laboratory work showed normocytic normochromic anemia with no leucocytosis and no band forms. Blood chemistry was normal except for a modest increase of the C-reactive protein (43 mg/L). The left hand was red, swollen, and painful, which was clinically compatible with cellulitis. However, there was a pulsating mass on the palmar side of the hand.

Ultrasoundography showed a 14×8-mm area of decreased echogenicity with arterial flow on Doppler examination. Anatomic details were further delineated by arteriography, which showed a false aneurysm arising from the superficial palmar arch. Clinical presentation, ultrasonography, and angiography suggested a mycotic aneurysm. In the presence of aortic regurgitation, endocarditis was suspected and was actively searched for. Transthoracic echocardiography confirmed the known aortic regurgitation but revealed no vegetations. The patient refused transesophageal cardiac ultrasound. Blood cultures revealed the presence of a penicillin-resistant microorganism. Blood cultures and an echocardiogram led to the diagnosis of mycotic aneurysm. The presence of aortic valve regurgitation, endocarditis was suspected and was actively searched for. Transthoracic echocardiography confirmed the known aortic regurgitation but revealed no vegetations. The patient refused transesophageal cardiac ultrasound. The Gram-negative microorganism that is commonly found in mycotic aneurysms is the Salmonella species, but Escherichia Coli and Pseudomonas aeruginosa also have been reported. Less common causes of mycotic aneurysms may be fungi (Aspergillus, Candida) in immunocompromised patients. Because the infection weakens the arterial wall, the natural history of mycotic aneurysm is to enlarge and rupture regardless of whether the infection is cleared. Therefore, surgery is indicated, and the procedure of choice, when possible, is the excision of the aneurysm.

In conclusion, we report a well-documented case of mycotic false aneurysm of the superficial palmar arch presenting as hand cellulitis and leading to the diagnosis of hitherto undiagnosed endocarditis. Mycotic aneurysm in this location is very rare and has been previously reported in only 2 patients. Because mycotic aneurysm may affect almost every arterial vessel of the body, it may easily masquerade as some other severe infection. Therefore, in absence of overt endocarditis, the diagnosis may be very puzzling, as shown by this case report.

Disclosures

None.

References


A. Clinical presentation of the hand on admission. B. Doppler ultrasonography showing the mycotic aneurysm with arterial flow. C. Confirmation of the lesion by arteriography. D. View of the mycotic aneurysm after surgical removal. E. Histological view showing the destruction of the arterial wall. Miller stain, 25×. F. Gram stain (400×) showing Gram-positive cocci.