

Jennifer J. Lee, MD, FAAD, Renee Y. Hsia, MD, MSc

From the Department of Dermatology, Harvard Medical School, Beth Israel Deaconess Medical Center, Boston, MA (Lee); and the Department of Emergency Medicine, San Francisco General Hospital, University of California San Francisco, San Francisco, CA (Hsia).

0196-0644/\$-see front matter

Copyright © 2009 by the American College of Emergency Physicians.

doi:10.1016/j.annemergmed.2010.01.019



Figure 1. Image of patient's left ankle lesion.



Figure 2. Close-up of left ankle.

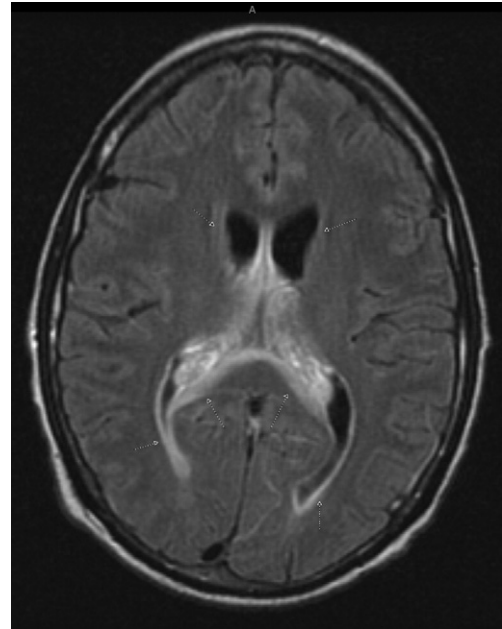


Figure 3. MRI of the brain, demonstrating abnormal T2 signaling lining the ventricular wall. Used with permission of Renee Y. Hsia, MD, MSc, Department of Emergency Medicine, San Francisco General Hospital, University of California San Francisco, San Francisco, CA.

[Ann Emerg Med. 2011;57:100.]

A 42-year-old white male patient status post–liver transplantation presented to the emergency department (ED) with altered mental status, headache, nausea, and fatigue for several weeks. He denied fever, chills, photophobia, and neck stiffness. His medical history was significant for autoimmune hepatitis, for which he received an orthotopic liver transplant 9 years ago. His immunosuppressive regimen included mycophenolate mofetil, tacrolimus, and prednisone. His cellulitis had not responded to 3 courses of intravenous antibiotics, and repeated wound and blood culture results were negative. Imaging studies were negative for abscess.

On presentation, the patient was afebrile, with normal vital signs. Physical examination was unremarkable except for swelling of his left ankle, with a 1- \times -2-cm crusted plaque over the medial malleolus, with surrounding erythema (Figures 1 and 2). His neurological examination result was normal. Initial study results (blood work and computed tomography) conducted in the ED were negative. Dermatology was consulted and a skin biopsy was performed.

For the diagnosis and teaching points, see page 103.

To view the entire collection of Images in Emergency Medicine, visit www.annemergmed.com

3. Retezar R, Bessman E, Ding R, et al. The effect of triage diagnostic standing orders on emergency department treatment time. *Ann Emerg Med.* 2011;57:89-99.
4. Welch S, Augustine J, Camargo CA Jr, et al. Emergency department performance measures and benchmarking summit. *Acad Emerg Med.* 2006;13:1074-1080.
5. *Urgent Matters Learning Network II: Standardized Performance Measurement and Reporting in Emergency Departments.* Washington, DC: George Washington University; 2010.
6. Welch SJ, Asplin BR, Stone-Griffith S, et al. Emergency department operational metrics, definitions and data dictionary: results of the Second Performance Measures and Benchmarking Summit. *Ann Emerg Med.* In press.
7. Sprivilis PC, Da Silva JA, Jacobs IG, et al. The association between hospital overcrowding and mortality among patients admitted via Western Australian emergency departments. *Med J Aust.* 2006;184:208-212.
8. Richardson DB. Increase in patient mortality at 10 days associated with emergency department overcrowding. *Med J Aust.* 2006;184:213-216.
9. Chalfin DB, Trzeciak S, Likourezos A, et al. Impact of delayed transfer of critically ill patients from the emergency department to the intensive care unit. *Crit Care Med.* 2007;35:1477-1483.
10. Patient Protection and Affordable Care Act. United States Congress, P.L. 111-148.

IMAGES IN EMERGENCY MEDICINE

(continued from p. 100)

DIAGNOSIS:

Cryptococcus neoformans. Culture of the skin lesion showed *Cryptococcus neoformans*. Brain magnetic resonance imaging (MRI) showed abnormal signaling suggestive of meningitis, ventriculitis, and plexitis (Figure 3). Lumbar puncture revealed cerebrospinal fluid titers of cryptococcal antigen, confirming the diagnosis of disseminated cryptococcal infection. The patient began receiving intravenous fluconazole. Because of high antigen titers on repeated lumbar punctures, amphotericin B and flucytosine were initiated, after which his cellulitis resolved and mental status improved.

C neoformans is an encapsulated budding yeast found in high concentrations in pigeon droppings, as well as soil, fruit, and other sources in nature.¹ Cutaneous cryptococcosis is rare, occurring in only 10% to 20% of affected individuals.² The skin is the most frequent site of involvement in organ transplant patients receiving certain immunosuppressant drugs.

Risk factors for disseminated disease include transplantation, cancers, corticosteroids, diabetes, or connective tissue disease.³ One study shows a 42% mortality rate in organ transplant recipients with cryptococcal infection.³ Skin findings can be a manifestation of disseminated disease, particularly in immunocompromised patients.

REFERENCES

1. Vogelaers D, Petrovic M, Deroo M, et al. A case of primary cutaneous cryptococcosis. *Eur J Clin Microbiol Infect Dis.* 1997;16:150-152.
2. Antony SA, Antony SJ. Primary cutaneous cryptococcus in nonimmunocompromised patients. *Cutis.* 1995;56:96-98.
3. Husain S, Wagener MM, Singh N. *Cryptococcus neoformans* infection in organ transplant recipients: variables influencing clinical characteristics and outcome. *Emerg Infect Dis.* 2001;7:375-381.