James F. Holmes, MD, MPH
Daniel P. Link, MD
Lynette Scherer, MD
Aaron E. Bair, MD

From the Department of Emergency Medicine (Holmes, Bair), Department of Radiology (Link), and Department of Surgery (Scherer), UC Davis School of Medicine, Sacramento, CA.

0196-0644/$-see front matter

doi:10.1016/j.annemergmed.2007.07.006

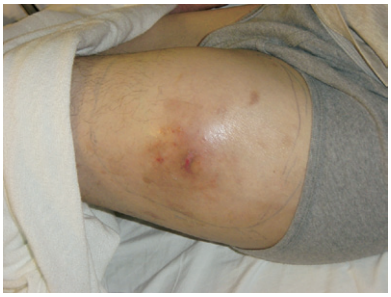

Figure 1. Left thigh mass.

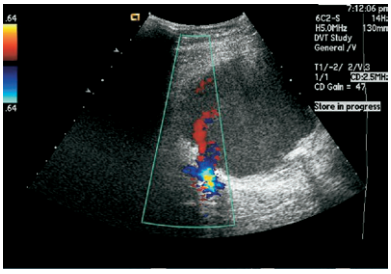

Figure 2. Doppler ultrasonography of mass.

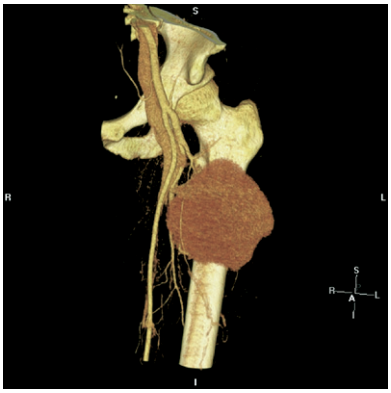

Figure 3. Computed tomographic angiography of left lower extremity.

Figure 4. Left lower extremity arteriogram.

Figure 5. Arteriogram status post stent deployment. Used with permission of James F. Holmes, MD, MPH, Department of Emergency Medicine, University of California-Davis School of Medicine, Sacramento, CA.

[Ann Emerg Med. 2008;51:330.]

A 32-year-old man presented to the emergency department (ED) for evaluation of continued left thigh pain and swelling. Six weeks before, the patient sustained a stab wound to the superiolateral aspect of his left thigh, and ED evaluation consisted of a normal plain radiograph and wound cleaning. Two weeks after the initial ED visit, the patient developed pain and swelling at the site and was treated by his primary care physician with 2 courses of oral antibiotics for presumed abscess.

For the diagnosis and teaching points, see page 342.
To view the entire collection of Images in Emergency Medicine, visit www.annemergmed.com

3. Scheinkestel CD, Bailey M, Myles PS, et al. Hyperbaric or normobaric oxygen for acute carbon monoxide poisoning: a randomized controlled clinical trial. *Med J Aust.* 1999;170:203-210.
4. Thom SR. Hyperbaric-oxygen therapy for acute carbon monoxide poisoning. *N Engl J Med.* 2002;347:1105-1106.
5. Ernst A, Zibrak JD. Carbon monoxide poisoning. *N Engl J Med.* 1998;339:1603-1608.
6. Hampson NB, Mathieu D, Piantadosi CA, et al. Carbon monoxide poisoning: interpretation of randomized clinical trials and unresolved treatment issues. *Undersea Hyperb Med.* 2001;28: 157-164.
7. Jones AL, Flanagan RJ. Hyperbaric oxygen. In: Dart RC, ed. *Medical Toxicology.* Philadelphia, PA: Lippincott, Williams & Wilkins; 2004:217-220.
8. Lavonas EJ. Carbon monoxide poisoning. In: Shannon MW, Borron SW, Burns M, eds. *Haddad and Winchester's Clinical Management of Poisoning and Drug Overdose.* Philadelphia, PA: Elsevier; 2006.
9. Moon RE, Camporesi EM. Clinical care at altered environmental pressure. In: Miller RD, ed. *Anesthesia.* Philadelphia, PA: Churchill Livingstone; 2000:2271-2301.
10. Nelson LS, Hoffman RS. Inhaled toxins. In: Marx JA, ed. *Rosen's Emergency Medicine: Concepts and Clinical Practice.* Philadelphia, PA: Mosby; 2006:2432-2441.
11. Piantadosi CA. Carbon monoxide poisoning. *N Engl J Med.* 2002; 347;1054-1055.
12. Pitts S. 3 hyperbaric oxygen treatments reduced cognitive sequelae of acute carbon monoxide poisoning. *ACP J Club.* 2003;138:67.
13. Thom SR. Carbon monoxide poisoning. In: Brent J, Wallace KL, Burkhart KK, et al, eds. *Critical Care Toxicology: Diagnosis and Management of the Critically Poisoned Patient.* Philadelphia, PA: Elsevier/Mosby; 2005:975-985.
14. Tomaszewski CA. Carbon monoxide. In: Ford MD, Delaney KA, Ling LJ, et al, eds. *Clinical Toxicology.* Philadelphia, PA: Saunders; 2001:657-667.
15. Tomaszewski C. Carbon monoxide. In: Goldfrank LR, Flomenbaum NE, Lewin NA, et al, eds. *Goldfrank's Toxicological Emergencies.* New York, NY: McGraw-Hill; 2002:1478-1491.
16. Phin N. Carbon monoxide poisoning (acute). *Clin Evid.* 2005;13: 1732-1743.
17. Juurlink DN, Buckley NA, Stanbrook MB, et al. Hyperbaric oxygen for carbon monoxide poisoning. Cochrane Database of Systematic Reviews; 2005; issue 1:CD002041. DOI: 10.1002/14651858.CD002041. pub2.
18. Buckley NA, Isbister GK, Stokes B, et al. Hyperbaric oxygen for carbon monoxide poisoning: a systematic review and critical analysis of the evidence. *Toxicol Rev.* 2005;24:75-92.
19. Medicare Services Advisory Committee. Hyperbaric oxygen therapy: MSAC applications 1018-1020 assessment report: Canberra, Australia, 2000. Available at: http://www.msac.gov.au/internet/msac/publishing.nsf/Content/AD35ED216E990FC7CA2571420004A192/$File/MSAC%201018-1020%20-%20HBOT.pdf. Accessed December 28, 2007.
20. Anonymous. *Hyperbare Sauerstofftherapie (HBO2) Zusammenfassender Bericht des Arbeitsausschusses "Ärztliche Behandlung" des Bundesausschusses der Ärzte und Krankenkassen über die Beratungen der Jahre 1999 und 2000 zur Bewertung der Hyperbaren Sauerstofftherapie gemäß §135 Abs.1 SGB V* [*Hyperbaric Oxygen Therapy (HBO_2) Summary Report of the Working Committee on "Medical Treatment" of the Federal Committee of Physicians and Health Insurance Companies Covering Years 1999 and 2000 for the Evaluation of Hyperbaric Oxygen Therapy in Accordance with §135 Abs.1 SGB V*] [German]. Köln, Germany: Geschäftsführung des Arbeitsausschusses; 2000. Available at: www.kbv.de/hta/2393.html. Accessed December 28, 2007.
21. Weaver LK. Hyperbaric oxygen in carbon monoxide poisoning – Conflicting evidence that it works. *BMJ.* 1999;319:1083-1084.
22. Thom SR. Hyperbaric oxygen therapy for carbon monoxide poisoning: is it time to end the debate? *Toxicol Rev.* 2005;24: 157-158.
23. The Cochrane Library – Feedback: Hyperbaric oxygen for carbon monoxide poisoning. Available at: http://www.cochranefeedback.com/cf/cda/citation.do?id=9531. Accessed December 28, 2007.

IMAGES IN EMERGENCY MEDICINE

(continued from p. 330)

DIAGNOSIS:

Profunda femoral artery pseudoaneurysm after a stab wound. ED evaluation revealed a 20-cm area of swelling in the proximal thigh (Figure 1), thought initially to be an abscess. Further examination, however, documented a palpable pulse and audible bruit. Doppler ultrasonography revealed a large cystic structure with marked flow signal (Figure 2), consistent with pseudoaneurysm. Computed tomography (CT) angiography confirmed a large pseudoaneurysm and arteriovenous fistula arising from the left profunda femoral artery (Figure 3). Interventional radiology confirmed the injury (Figure 4) and deployed a stent graft over the site of injury. After stent deployment, there was no filling of the pseudoaneurysm (Figure 5). Through 6 weeks of follow-up, the patient recovered well, with resolution of his swelling and no further complications.

Pseudoaneurysms may occur after penetrating injuries or procedures requiring arterial punctures. In this case, the patient was initially considered to have an abscess, according to the history of failing oral antibiotic treatment. In patients with swelling and erythema after penetrating trauma, pseudoaneurysm should be considered before performance of incision and drainage of a presumed abscess because such a procedure may be life threatening in the patient with a pseudoaneurysm. Radiologic studies, including Doppler ultrasonography or CT angiography, will correctly differentiate a pseudoaneurysm from an abscess. Treatments for a pseudoaneurysm are varied and depend on multiple factors.