

ANSWER TO PHOTO QUIZ (SEE PAGE 607)



Figure 1. Extensive edema, induration, and hemorrhagic bullous changes on the arm of a 54-year-old female who had handled raw meat before presentation. Note the primary anthrax lesion of the left fifth finger.

Diagnosis: Cutaneous anthrax

Our patients' clinical presentations were characteristic of cutaneous anthrax. The well-developed lesion of cutaneous anthrax is characterized by a central eschar as well as a ring of vesicles and surrounding edema that is characteristically painless. Physicians should suspect the diagnosis of cutaneous anthrax if patients have histories of exposure to infected animal carcasses (e.g., if they have slaughtered or skinned an infected animal or handled raw meat). The cutaneous lesions occur primarily on exposed parts of the body such as the hands, arms, face, and neck. Atypical localization of lesions can also be seen. Gas and abscess formation are not observed in patients with cutaneous anthrax. In the differential diagnosis of this form of anthrax, necrotizing soft-tissue infections (particularly those due to group A streptococci or clostridia) and severe cellulitis should be considered.

Occasionally, the cutaneous reaction may be severe in patients with cutaneous anthrax; such patients may have extensive edema, induration, erythema, blisters, and bullae containing hemorrhagic fluid. These patients may also have regional lym-



Figure 2. A well-developed cutaneous anthrax lesion on the left forearm of a 34-year-old male who skinned a cow that died 2 weeks before his presentation to the hospital.

phangitis, lymphadenomegaly, and high fever. A severe cutaneous reaction was observed in our first case (figure 1). A well-developed anthrax lesion on the left forearm was observed in the second case (figure 2).

The clinical diagnosis of cutaneous anthrax should be confirmed by the demonstration of gram-positive capsulated bacilli on the smear of the lesion and by the isolation of *Bacillus anthracis* in culture. Gram-positive capsulated bacilli were demonstrated on smears, and cultures were positive for *B. anthracis* in both of our cases. Examination of the smear and culture for *B. anthracis* may be negative when patients receive antibiotics before testing; in these cases, the diagnosis of cutaneous anthrax can be confirmed serologically [1].

Penicillin is active against *B. anthracis* in vitro, and it is still the drug of choice in the treatment of anthrax [2]. The first patient received therapy with penicillin G for 10 days, the second patient for 8 days. Treatment was successful in both cases.

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References

1. Turnbull PCB, Doğanay M, Lindeque PM, Aygen B, McLaughlin J. Serology and anthrax in humans, livestock and Etosha National Park wildlife. *Epidemiol Infect* 1992;108:299–313.
2. Doğanay M, Aydın N. Antimicrobial susceptibility of *Bacillus anthracis*. *Scand J Infect Dis* 1991;333–5.

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