A Thai Woman with Fever and Skin Lesions  
(See pages 988–9 for Photo Quiz)

Diagnosis: Disseminated *Burkholderia pseudomallei* infection presenting with ecthyma-like skin lesions.

After gram staining was performed on a skin lesion specimen (figure 1 and figure 2), treatment with intravenous ceftazidime and cotrimoxazole was administered to the patient. On day 3 of hospitalization, cornflower head-shaped colonies with a muddy odor grew from the culture of the lesion specimen and all blood cultures (figure 3). All culture isolates were subsequently identified as *Burkholderia pseudomallei*; the strain was susceptible to ceftazidime, cefoperazone/sulbactam, cotrimoxazole, doxycycline, and chloramphenicol. The *B. pseudomallei* antibody titer was positive at 1:320. Abdominal ultrasonography was negative for any evidence of intra-abdominal abscesses.

Melioidosis, caused by a category II bioterrorism agent, is a seasonal infectious disease with clinical presentations in areas where it is endemic during the rainy season [1–3]. In northeastern Thailand, the annual incidence has been estimated to be 4.4 cases per 100,000 persons [4]. The infection has mainly affected people who have direct contact with wet soil in rice paddy fields, especially people with underlying conditions that predispose them to infection, such as diabetes mellitus, renal insufficiency, cirrhosis, thalassaemia, alcoholism, and immunosuppression [5]. Of the predisposing conditions, diabetes mellitus is the most common underlying risk factor for melioidosis [5], as in this case. *B. pseudomallei* grows aerobically on almost any agar media, visible colonies form within 24 h at a temperature of 37°C [5]. The colonies usually develop the
Figure 3. Cornflower head–shaped colonies with a muddy odor grew from cultures of skin lesion specimens and 2 cultures of blood samples. A characteristic appearance of cornflower heads [6]. Although nonspecific, gram staining of the organism usually shows gram-negative, bipolar rods that characteristically resemble safety pins (Figure 2).

Although intra-abdominal ultrasound findings were normal in this case, 95% of splenic abscesses are caused by B. pseudomallei in northeastern Thailand [6]. Furthermore, although presentation of disseminated melioidosis with ecthyma-like lesions is rare, ≤13% of patients with B. pseudomallei septicemia have subcutaneous abscesses in which gram-negative rods can be detected [6].

The patient was treated successfully with intravenous cef-tazidime and cotrimoxazole for 14 days and received a maintenance regimen of doxycycline, chloramphenicol, and cotrimoxazole for an additional 20 weeks. Three months after the completion of therapy, the patient remained healthy, without any evidence of ongoing or recurrent infection.

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References