CHEST

A 66-Year-Old Woman With Fever, Cough, and a Tongue Lesion

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A 66-year-old woman presented with acute onset of fever, chills, and productive cough associated with right-sided chest pain. During a recent hospitalization for dyspnea, she had been diagnosed with Coombs-positive autoimmune hemolytic anemia and had been taking a tapering dose of prednisone starting approximately 6 weeks prior to admission. In the interim, her dyspnea had resolved on treatment with steroids. At the time of presentation, her prednisone dose was 40 mg. Additional medical history included VTE, for which the patient was receiving anticoagulation therapy, and steroid-induced diabetes mellitus. Many years earlier, she had been treated for TB in her home country. The patient had immigrated to Queens, New York, from a Nepalese village 8 years prior. While still in Nepal, she had worked on a farm and had been in close proximity to cows. In Queens, she lived with her family in a house with a small garden but had no pets. Recent travel included a visit to Nepal 9 months ago and a trip to Syracuse, New York, one month prior to presentation. She was a never smoker and did not consume alcohol.

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On admission, she had normal hemodynamics, with a respiratory rate of 20 breaths/min and an oxygen saturation of 94% while breathing ambient air. Her temperature was 38.8°C. Physical examination revealed unlabored breathing with decreased breath sounds at the right base and crackles more cephalad. There was also a painless, 1-cm ulcer on the dorsum of the tongue (Fig 1). The remainder of the examination was unremarkable.

CBC revealed a normal leukocyte and platelet count with a hemoglobin level of 11.2 g/dL. Serum sodium level was 132 mEq/L, and serum potassium level was 3.2 mEq/L. Serum creatinine concentration was 0.7 mg/dL. Liver function test results were normal. International normalized ratio was 3.7 with the patient taking warfarin. Posteroanterior and lateral chest radiographs (Figs 2A, 2B) showed a dense opacity at the right lung base, obscuring the diaphragm. The previous posteroanterior and lateral chest radiographs taken about 6 weeks before were normal.

The patient was started on cefepime and vancomycin for health-care-associated pneumonia. Prednisone was continued. Blood cultures and urine *Legionella* antigen testing were ultimately negative. Her subsequent hospital course was complicated by worsening anemia due to hemorrhoidal bleeding, which prompted cessation of anticoagulation and eventual hemorrhoidectomy. Two weeks into her hospital stay, she had recurrence of fever, this time with associated leukocytosis. Worsening right-sided opacification on chest radiography

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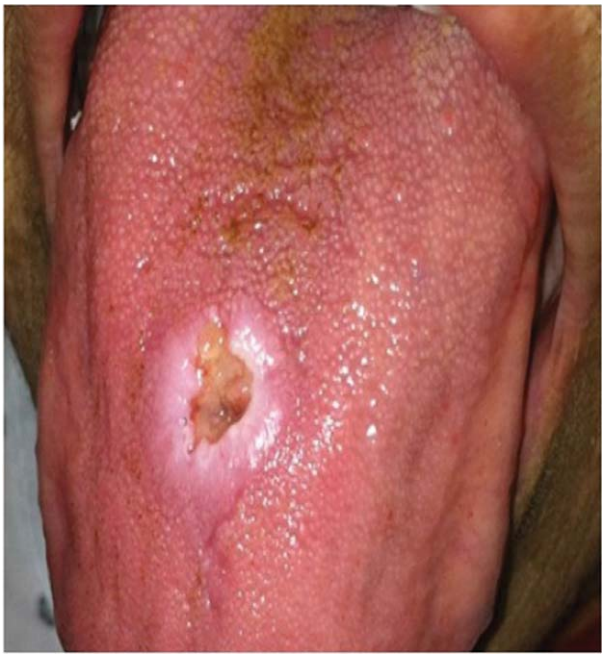

Figure 1 – *Necrotic ulcer, 1 cm in diameter, with heaped-up margins, found on the dorsum of the patient's tongue.*

prompted CT scan of the chest (Figs 2C, 2D), which revealed multilobar, dense consolidation with air bronchograms and foci of necrosis. There was no significant intrathoracic lymphadenopathy by CT scan criteria. Routine sputum cultures were positive only for *Candida albicans*. The tongue ulcer was scraped, and, at the same time, the patient underwent bronchoscopy with BAL and transbronchial biopsy. Ulcer scrapings, BAL fluid, and biopsy tissue were submitted for bacterial, fungal, and mycobacterial cultures. Biopsy tissue stained with hematoxylin and eosin (H&E) demonstrated granulomatous inflammation with numerous microorganisms (Figs 3A, 3B). Gomori methenamine silver and mucicarmine staining results are shown in Figures 3C and 3D.

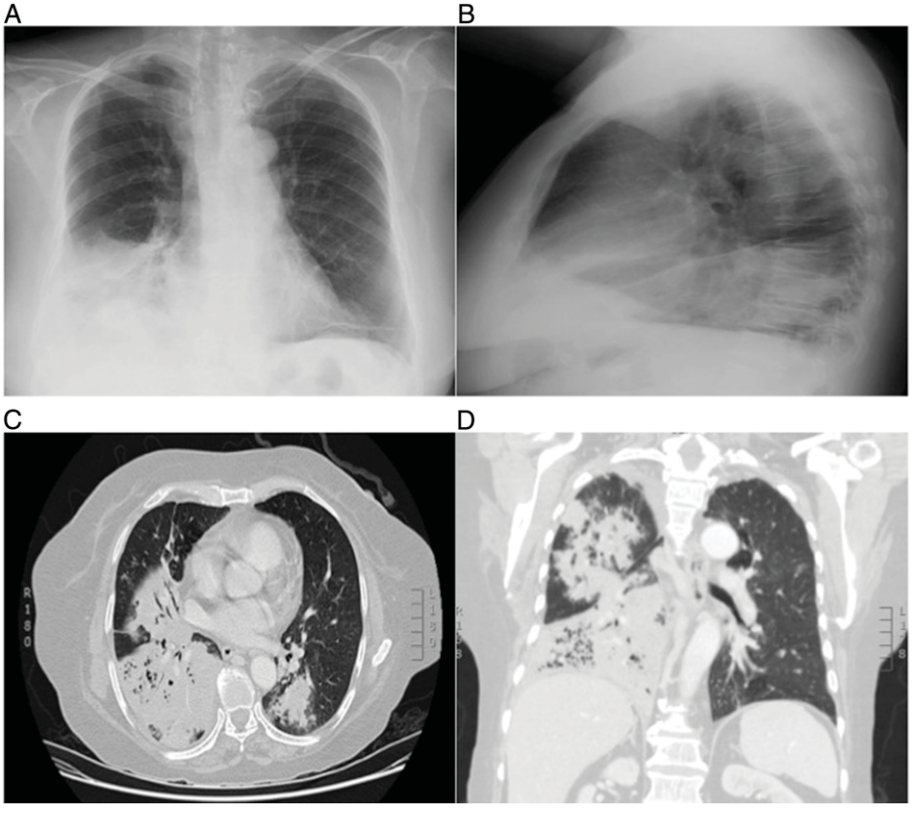

Figure 2 – *A, Posteroanterior chest radiograph showing dense opacification at the right lung base obscuring the diaphragm. B, Lateral chest radiograph. C, Axial CT scan of the chest showing multilobar, dense, masslike consolidation within which air bronchograms and a few scattered necrotic foci can be identified in the absence of proximal endobronchial obstruction or effusion. D, Coronal CT scan of the chest.*