

Images in Infectious Diseases

Diffuse alveolar hemorrhage as a presentation of severe anicteric leptospirosis

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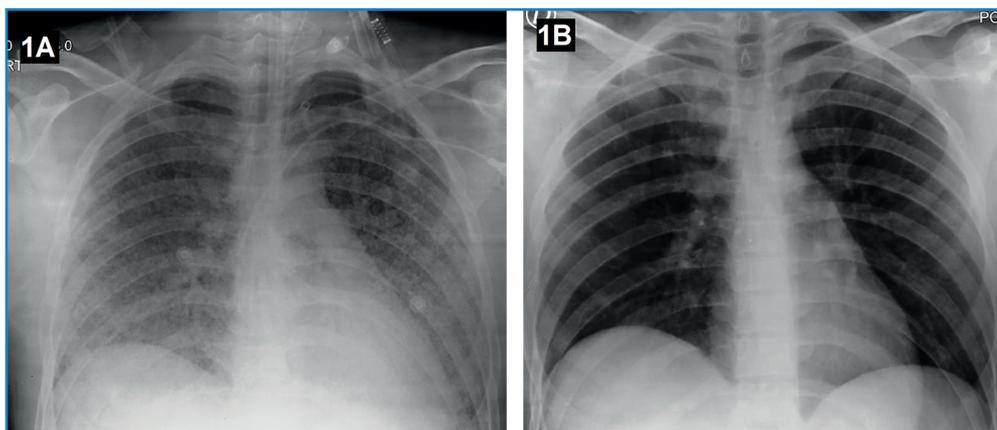


FIGURE 1: Chest radiograph showing mixed opacities distributed in the parenchyma of all four quadrants of both lungs, without consolidations (A); and complete resolution of the lung infiltrates following treatment (B).

An 18-year-old Colombian male soldier was referred to our institution for a febrile illness that had progressively worsened over 8 days. His symptoms included fever, general malaise, cough, and hemoptysis, which progressed to respiratory distress, necessitating orotracheal intubation. Chest radiography revealed diffuse bilateral mixed opacities (Figure 1A). A complete blood count showed leukocytosis and neutrophilia, and blood biochemistry showed elevated creatine and phosphokinase levels. Both a rapid IgM test and an IgM ELISA were positive for *Leptospira*. High-resolution chest computed tomography (Figure 2A and 2B) revealed a classic

pattern of diffuse alveolar hemorrhage, which was subsequently confirmed by bronchoscopy and bronchoalveolar lavage. We initiated ceftriaxone and methylprednisolone pulse therapy at a dose of 1000 mg/day for 3 days, followed by 1 mg/kg/day for 7 days.

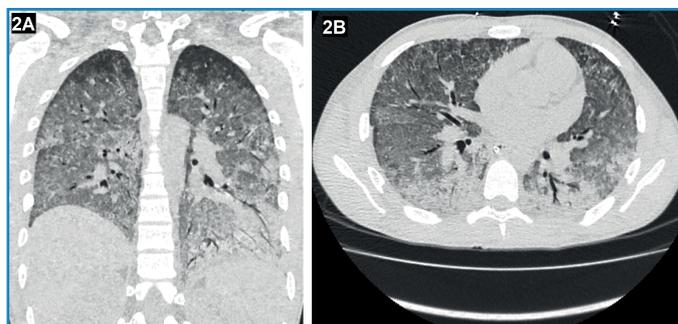


FIGURE 2: High-resolution chest computed tomography (coronal (A) and transverse (B) planes) showing alteration in the attenuation coefficients of the lung parenchyma due to diffuse ground-glass attenuation of the parenchyma of both lungs, with thickening of the interlobular and intralobular septa and bilateral consolidation in the lower lobes, primarily in the basal segments.

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After treatment, the patient's clinical condition rapidly improved, enabling successful weaning from mechanical ventilation (**Figure 1B**). A serum sample collected on day 8 of illness was retrospectively tested using a microscopic agglutination test, which yielded a positive result for *Leptospira kirschneri* serogroup Cynopteri with a dilution of 1:3,200.

Diffuse alveolar hemorrhage is a rare but potentially life-threatening presentation of human leptospirosis that usually occurs during the icteric phase of the illness^{1,2}. However, it can occur during the anicteric phase in a small percentage of patients, posing a clinical diagnostic challenge, particularly in critically ill patients^{1,2}. Although randomized clinical trials are lacking, the use of steroids for the treatment of leptospirosis with diffuse alveolar hemorrhage leads to favorable outcomes and is generally safe³.

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