Clinical Images

Diffuse Alveolar Hemorrhage: Blood, Sweat and Tears

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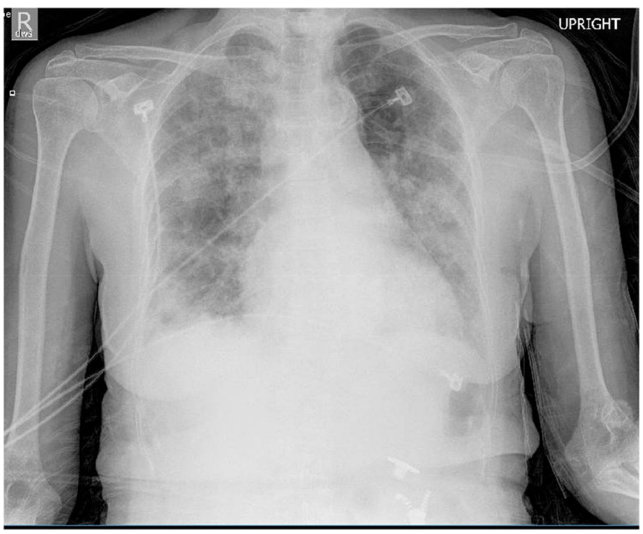

Fig. 1 Chest x-ray showing bilateral multifocal patchy airspace opacities

A 68-year-old woman with systemic sclerosis and interstitial lung disease presented with progressive cough and dyspnea. She was in respiratory distress, with a heart rate of 110 beats per minute, respiratory rate 35, and oxygen saturation 63% on ambient air, which improved to 94% with 15l of 100% oxygen by face mask. Lungs had diffuse crackles throughout. Lab results revealed hemoglobin of 7.2g/dL. Her chest x-ray showed multifocal bilateral airspace opacities (Fig.1). She was intubated; subsequent bronchoscopy revealed progressively hemorrhagic lavage fluid (Fig.2) indicative of diffuse alveolar hemorrhage (DAH). She was started on high-dose intravenous corticosteroid and cyclophosphamide. Due to ongoing DAH, bleeding was temporized with intravenous aminocaproic acid and intrabronchial activated factor VIIa (rFVIIa).[1–3]

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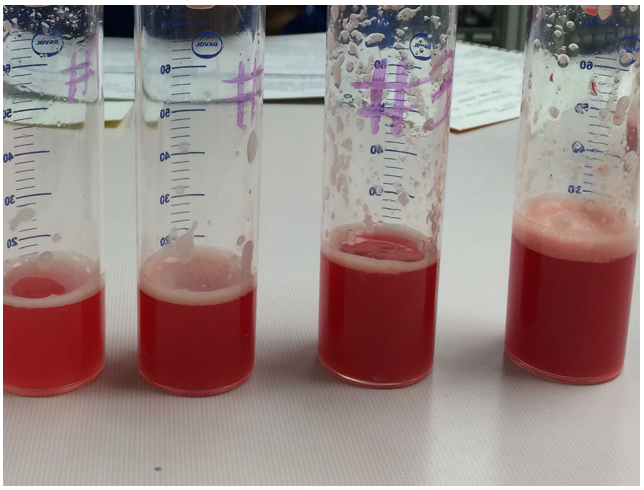

Fig. 2 Bronchoalveolar lavage (BAL) demonstrating sequential progressive hemorrhagic fluid indicative of diffuse alveolar hemorrhage (DAH). Left-most tube represents the initial lavage fluid, and right-most tube the final lavage fluid

Ultimately, she developed ventilator-associated pneumonia and died.

DAH is characterized by bleeding into the alveolar spaces from disruption of the alveolar–capillary barrier.[4] Cough, dyspnea and hemoptysis are common, although one-third of patients may not have hemoptysis.[5] DAH has a broad differential including ANCA-associated vasculitides, anti-GBM disease, lupus and rarely systemic sclerosis.[4,6,7] Treatment depends on the underlying cause, but in the setting of life-threatening DAH, intravenous aminocaproic acid and intrabronchial rFVIIa have been shown to temporize bleeding. Data on mortality benefit is lacking.[1–3]

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