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Diffuse Alveolar Hemorrhage Due to Hydralazine-Induced Lupus

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Diffuse Alveolar Hemorrhage Due to Hydralazine-Induced Lupus

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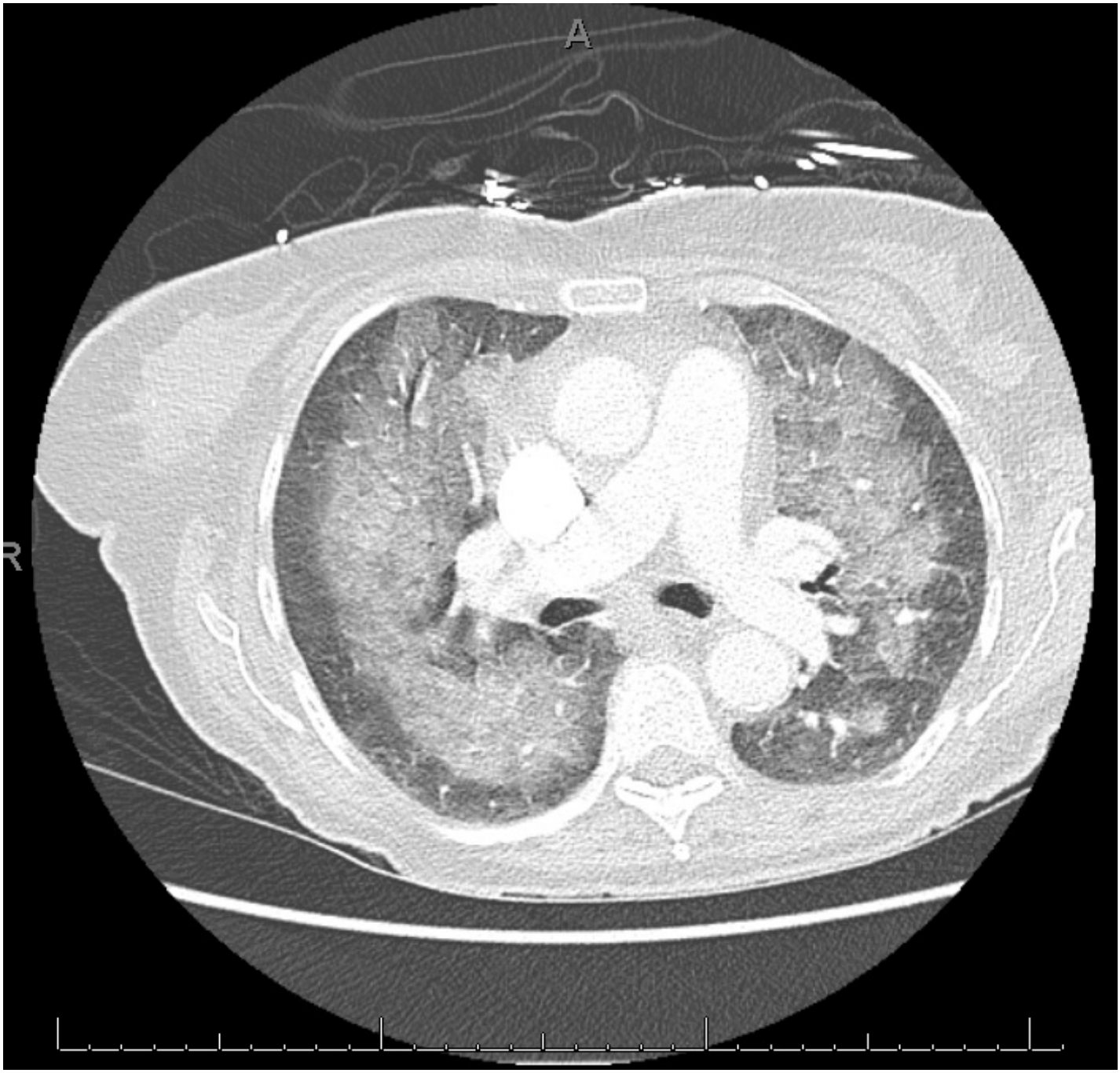
Introduction: Hydralazine is a known cause of drug-induced lupus. Rarely, it's been reported to cause major organ-threatening complications, manifesting as kidney disease and CNS involvement. It's also been associated with ANCA-positive vasculitis primarily involving the kidney, with uncommon pulmonary complications. We report a unique case of hydralazine-induced lupus presenting as diffuse alveolar hemorrhage (DAH) in the absence of renal disease or ANCA-positive vasculitis, which was successfully treated with systemic steroid monotherapy. Case description: The patient is an 86 year-old female with a history of chronic immune thrombocytopenia who presented to the hospital due to one week of dyspnea and hemoptysis. She denied fever, night sweats, weight loss, travel, incarceration, occupational exposures or known immune compromise. She is a non-smoker. Notably, she started taking Hydralazine 100mg BID 5 months prior due to poorly-controlled hypertension. CT angiogram of the chest revealed extensive bilateral central ground glass opacities with relative sparing of the peripheral lungs. Labs revealed anemia necessitating blood product transfusion. She had an unrevealing infectious and cardiac workup. Urinalysis showed bland sediment. The patient underwent flexible bronchoscopy, which revealed blood throughout the tracheobronchial tree, without an identifiable source of bleeding; serial lavage aliquots were progressively more sanguineous consistent with DAH due to pulmonary capillaritis. An autoimmune workup was notable for a positive ANA titer of 1:1280 in a homogeneous and speckled pattern, as well as a positive anti-histone antibody IgG of 163AU/mL; the remainder of the rheumatologic studies were unremarkable, including complement levels, anti-double stranded DNA antibody, anti Smith antibody, anti GBM antibody, ANCA titers, PR3 and MPO antibodies, rheumatoid factor, CCP antibody, anti RNP antibody, and anti SSA/SSB antibodies. Hydralazine was discontinued and the patient was started on systemic corticosteroids with complete resolution of her symptoms. Discussion: Hydralazine-induced lupus presenting as DAH is an extreme rarity. Only a few cases of DAH attributed to Hydralazine have been reported in the literature, often in the setting of ANCA-positive vasculitis with concomitant nephritis, wherein patients were treated with steroids, plasmapheresis, Cyclophosphamide and Rituximab. This case is unique in that there was no renal involvement or ANCA-positive vasculitis based on the antibody biomarker distribution. Discontinuation of the offending agent, as well as early bronchoscopy, autoimmune workup, and initiation of systemic corticosteroids are paramount to successful patient outcomes. Further investigation is necessary, as there currently exist no randomized trials that have examined the optimal treatment approach to drug-induced lupus.



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