

A rare case of recurrent multiple ground glass opacities responding to warfarin in a patient with anti-phospholipid syndrome: Insight to Pathophysiology and Management

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Objective

A case report of clinical presentation and imaging findings of a young adult female patient with underlying antiphospholipid syndrome (APS), who was on long term warfarin. She presented with recurrent hemoptysis, which subsequently resolves with warfarin resumption and improved drug compliance.

Material and Method

To discuss the possible pathophysiology and clinical implication of a case of anti-phospholipid syndrome presented with bilateral lung ground glass opacities and hemoptysis responding to adequate warfarinization.

Results

Diffuse alveolar hemorrhage manifesting as bilateral lung ground glass opacities is a rare lung manifestation in APS reported in limited case reports and series. Most cases found capillaritis in lung biopsy and patients responded quickly to steroid, while warfarin was withheld.

A 22-year-old female patient diagnosed with antiphospholipid syndrome (APS). She was put on long-term warfarin with a targeting INR value of 2.0-3.0. She had a poor out-patient compliance to warfarin with repeated admissions (more than 10 within 2 years) all were due to recurrent hemoptysis. The INR values upon all admission were below therapeutic range (< 2.0).

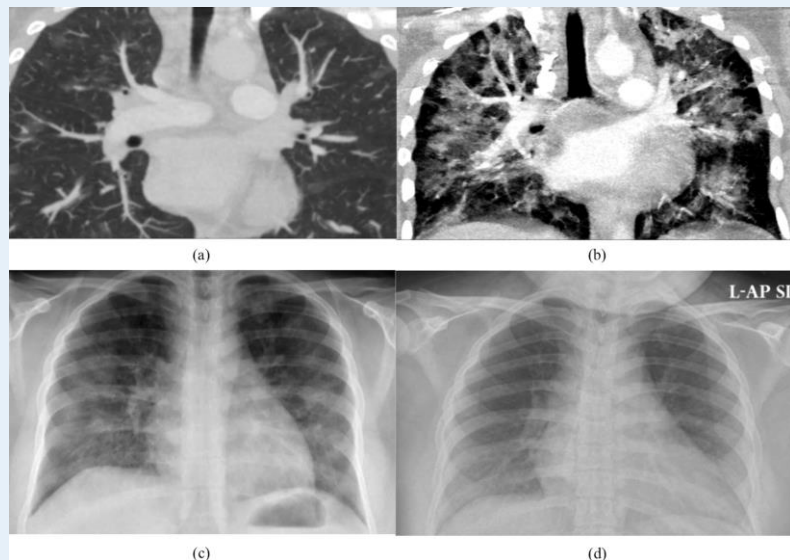


FIGURE 1: Various extents of bilateral lung ground glass opacities ranging from mild (a) to severe (b) in lung windows of contrast CT thorax in repeated admission of this patient with sub-therapeutic INR level and clinically dyspnea and hemoptysis. The bilateral lung opacities seen in the chest X-ray on admission (c) showed subsequent resolution (d) in all admission after titrating the dose of warfarin reaching the therapeutic range of INR value.

Results (con't)

Contrast CT thorax and pulmonary angiogram were performed in all admission which showed no thrombus in the major pulmonary arteries. Variable extent of bilateral lung symmetrical random ground glass opacities were seen. (Fig 1a, 1b and 1c)

IV hydrocortisone was prescribed in two of the admissions after exclusion of infection before the titration of warfarin dose. However, no significant response in clinical symptoms and bilateral lung opacities were seen. Rapid resolution of ground glass opacities upon warfarin titration was observed (Fig 1d), thus invasive lung biopsy was not performed.

Conclusion

This is the first case report of APS showing recurrent "paradoxical" clinical and radiological response of pulmonary hemorrhage to warfarin but no significant response to steroid. We propose an alternative pathophysiology of preferentially small pulmonary venules thrombosis which builds up pulmonary capillary pressure as the cause of pulmonary hemorrhage in this case. This case also demonstrates importance of close clinical and radiological surveillance for treatment response, which may spare APS patients with bilateral ground glass opacities from invasive lung biopsy.

Reference

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