

Anti-glomerular Basement Membrane Disease Presenting With Renal Failure And Extensive Deep Venous Thrombosis

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Introduction

- Anti-glomerular basement membrane disease or "Goodpasture's" is a rare autoimmune vasculitis that affects the small vessels of the lungs and kidneys.
- It is caused by antibodies that target the alpha-3 chain of type IV collagen which is highly expressed within the glomerular and alveolar basement membranes.
- The etiology of this disease is not well known and presentation typically includes both pulmonary and renal systems.
- Here we present a unique case of anti-GBM.

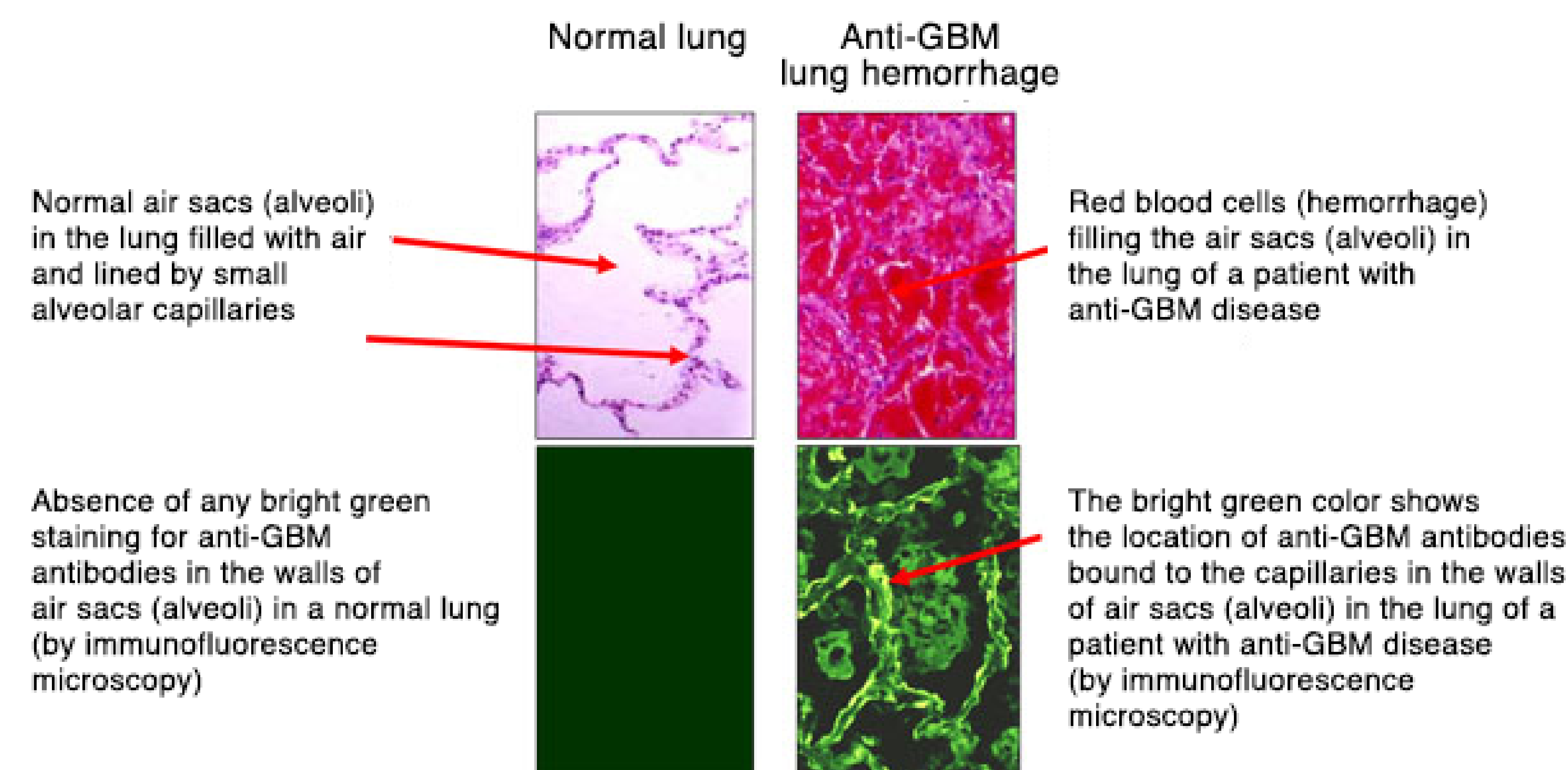
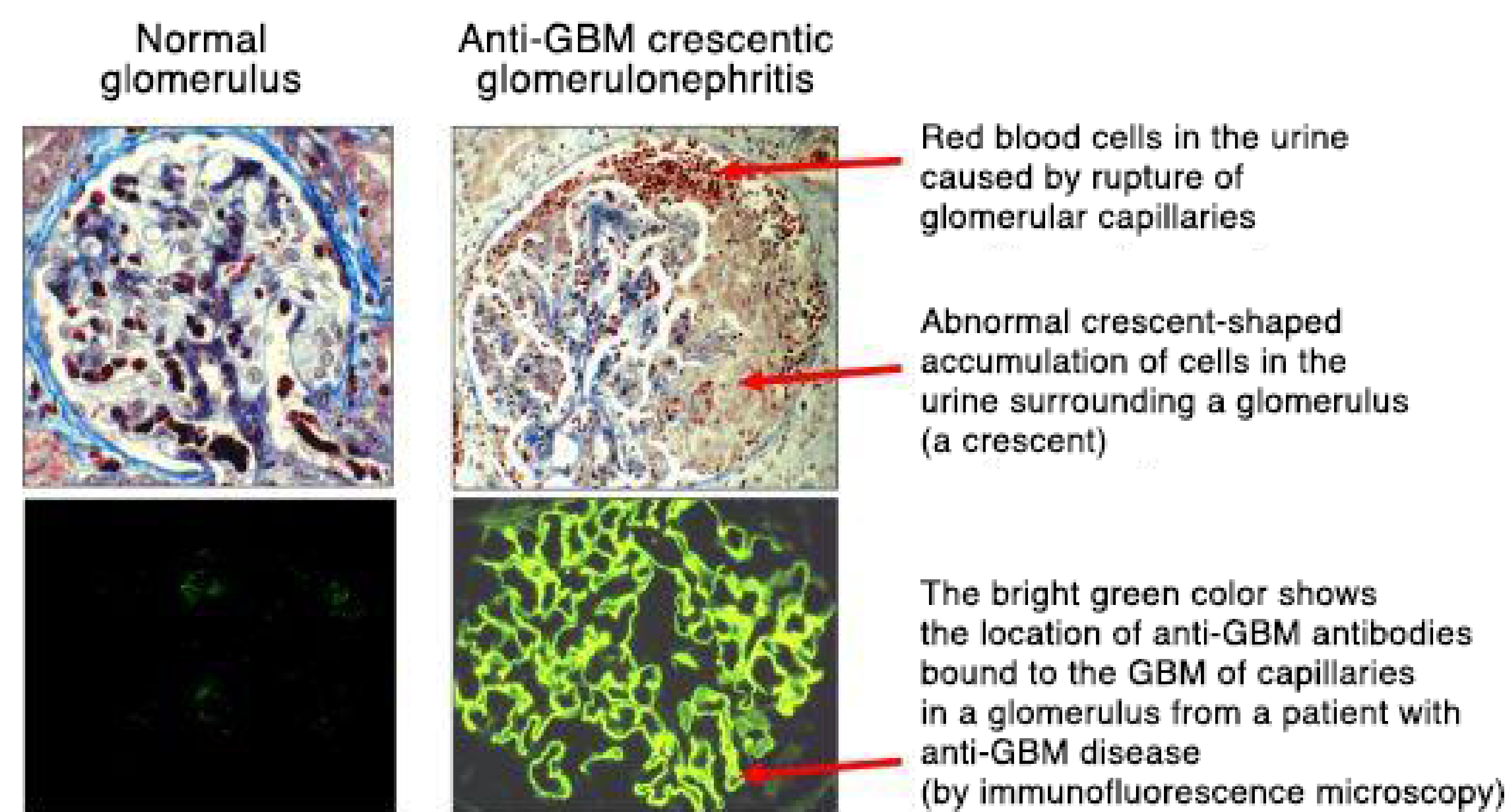
Case Presentation

- A 47 year old Male, w/ PMH of type 1 diabetes, presented to the ED with a weeklong history of nausea, vomiting and palpitations.
- Vitals on admission were stable.
- EKG showed supraventricular tachycardia with peaked T waves, multiple PVCs, intraventricular conduction delay, and right atrial enlargement.
- Initial labs significant for potassium 6.6 mg/dl, bicarbonate 13 mg/dl, BUN 158 mg/dl, and creatinine 13.4 mg/dl, as well as anemia and leukocytosis.
- UA was significant for proteinuria and blood.
- Chest X-ray was unremarkable.
- The patient was admitted to the ICU for symptomatic hyperkalemia and uremia, requiring emergent hemodialysis
- Renal ultrasound revealed no abnormality.
- He improved and was downgraded on hospital day 2 with plans to discharge after tunneled dialysis catheter placement.
- On day five, the patient acutely developed tachycardia, new leukocytosis, and fever.
- Broad infectious and rheumatologic workup revealed ESR-143, CRP-193, and positive p-ANCA titers of 1:160, raising suspicion for a vasculitis etiology.
- Venous dopplers revealed DVTs in both peroneal and posterior tibial veins and therapeutic heparin was initiated.
- Kidney biopsy revealed fibrocellular crescents consistent with anti-GBM nephritis.
- A three day course of pulse-dose steroids and cyclophosphamide with plans for plasmapheresis was initiated.
- Symptoms resolved and patient was discharged after appropriate treatment.

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Pathology

Renal Biopsy Finding in Anti-GBM Glomerulonephritis



Discussion

- 90% of anti-GBM patients present with rapidly progressive glomerulonephritis with mild proteinuria, hematuria and high creatinine.
- In 25-60% of cases, pulmonary symptoms are included.
- Venous thromboembolism(VTE) in anti-GBM patients is usually associated with cases of pulmonary hemorrhage(PH) which did not occur in our patient.
- In fact, concurrent VTE occurs in one-fifth of cases with severe PH.
- Anti-GBM disease is also an uncommon cause of end-stage kidney disease.
- Our patient presented as a 47 year old with acute renal failure requiring eventual dialysis and developed significant DVTs of bilateral lower extremities, but never exhibited any pulmonary symptoms.

Conclusion

- This uncommon presentation of the rare disease of anti-GBM is important to share in order to quicken diagnosis and treatment of future patients with this dangerous disease process.

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