

Biopsy Proven Anticoagulant Related Nephropathy

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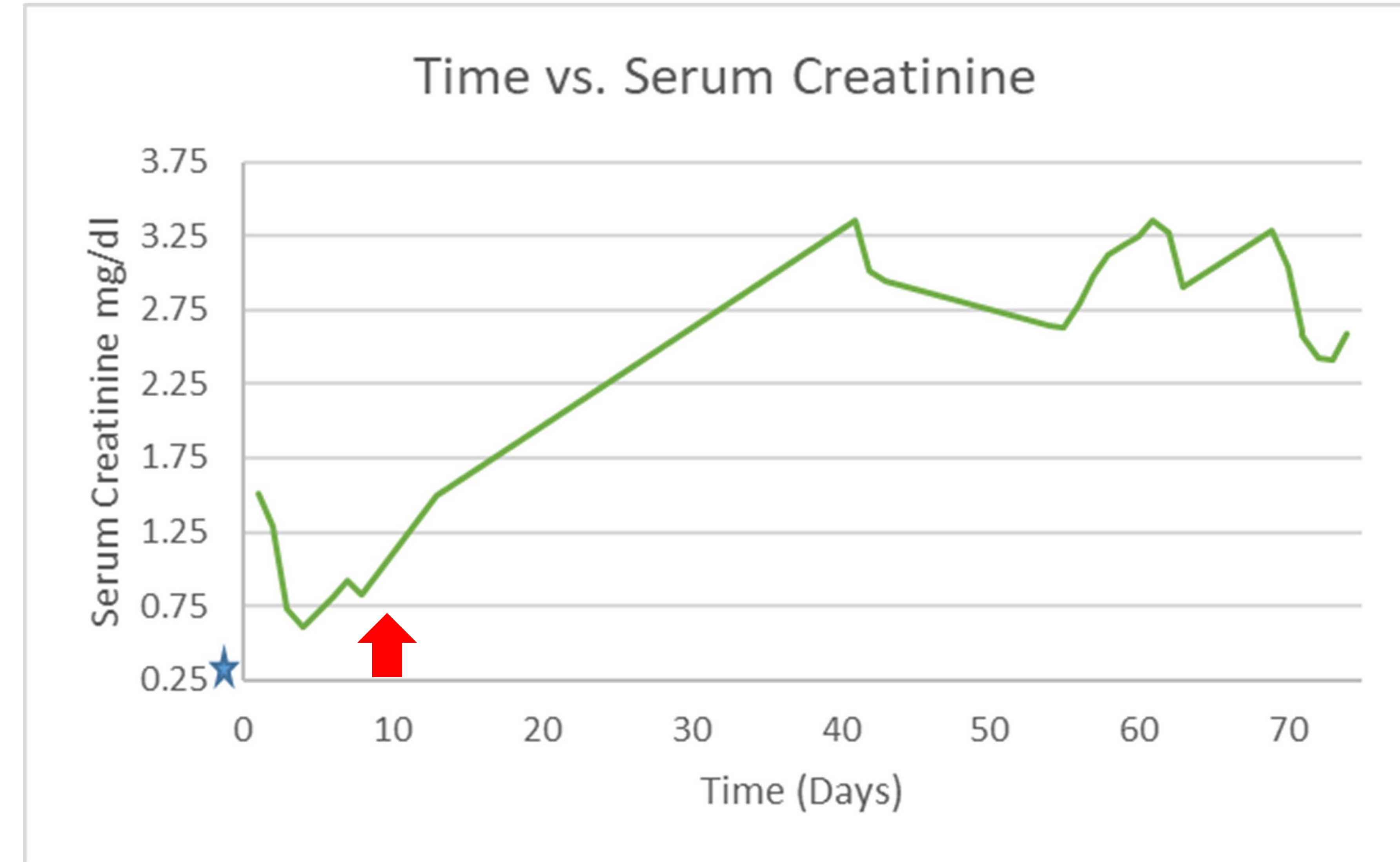
Case Presentation

- 64 year old man with history of well-controlled diabetes type 2, paroxysmal atrial fibrillation presented with worsening dyspnea of several weeks duration.
- Vital signs were normal and physical exam consistent with lower extremity edema. Labs showed chronic anemia and slight leukocytosis.
- Urinalysis revealed red blood cells with small amounts of hemoglobin and proteinuria. Chest-x-ray and echo were same as prior studies completed months prior. Renal ultrasound showed normal kidneys.
- He had been on rivaroxaban nearly a year for atrial fibrillation and after some hematochezia he was switched to apixaban instead for months after. Ever since starting these anticoagulation medications his creatinine had been steadily increasing with no clearly identifiable source.
- A full workup for other etiologies of acute kidney injury were negative
- Once he stopped taking anticoagulants his creatinine started to improve significantly.

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Graph above represents trend of creatinine over time in days since starting anticoagulation

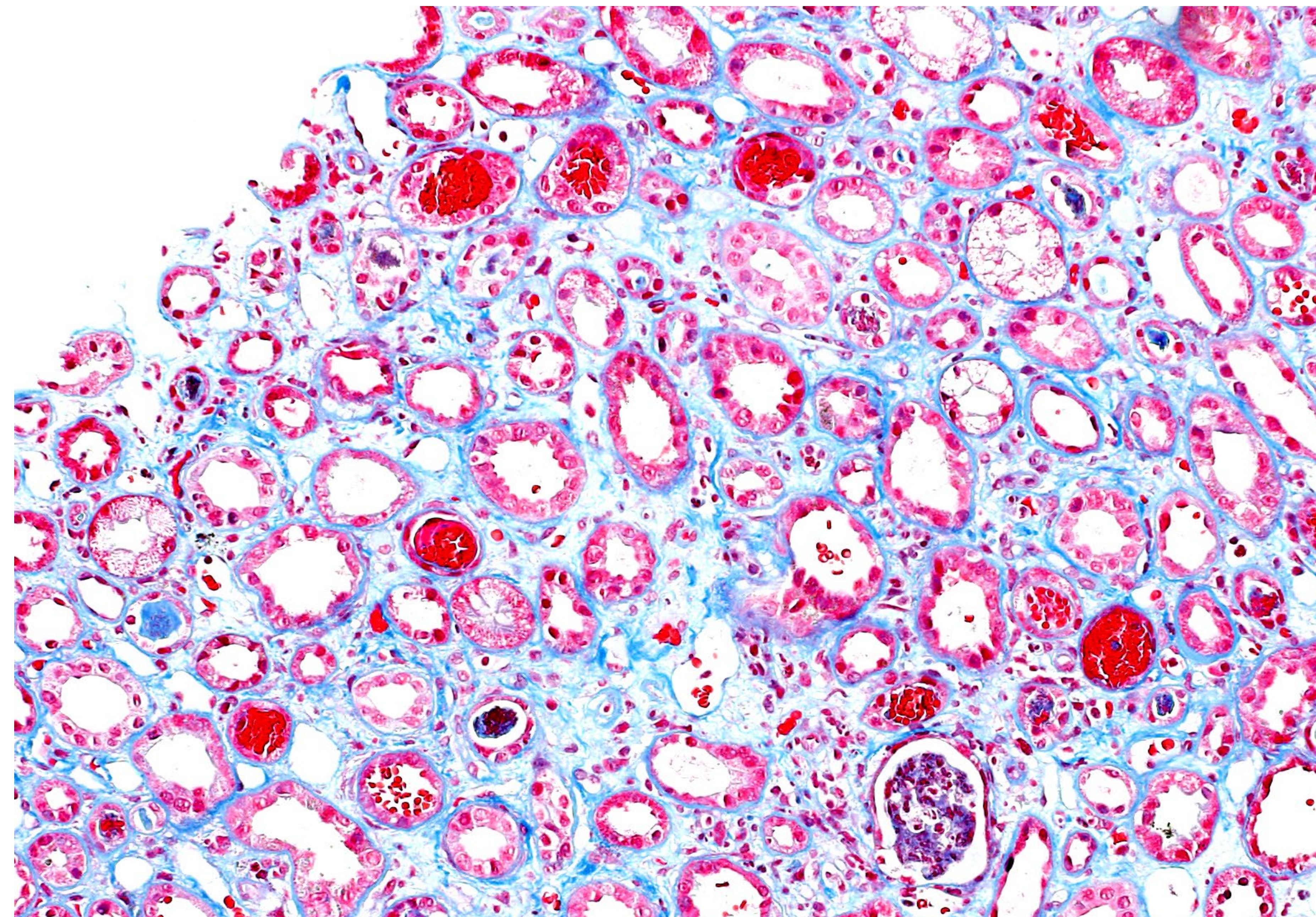


Image: Kidney biopsy consistent with anticoagulation-induced nephropathy.

Discussion

- It is important to consider newer anticoagulation agents as a potential trigger for acute kidney injury.
- During the time that the patient was on anticoagulation his creatinine had steadily increased without any obvious identifiable cause. The chronicity of anticoagulation initiation and his worsening kidney function suggest a possible connection.
- In clinical scenarios where it is difficult to precisely identify the triggering entity behind kidney injury, especially in the context of multiple comorbidities, renal biopsies are a valuable tool
- A renal biopsy along with a comprehensive history and clinical data will provide further information regarding the etiology of the kidney injury [1].
- The patient in this case had full workup for possible diseases and conditions that may lead to kidney injury. Other possible entities and infectious agents that may trigger kidney disease were deemed unlikely.

Conclusion

Anticoagulant-related-nephropathy is a relatively recently recognized phenomenon. The direct factor Xa inhibitors apixaban and rivaroxaban are two known causative agents. While these two medications are widely utilized, there may be a lack of awareness of their nephrotoxic potential.