

# Surviving the Perfect Storm: A Rare Case of Severe Babesiosis Complicated by Spontaneous Splenic Rupture, Subdural Hematoma, and Disseminated Intravascular Coagulation.

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## Introduction

- Babesiosis is a tick-borne parasitic infection caused by intraerythrocytic protozoa of the genus Babesia.
- This vector-borne illness is endemic to the Northeast and Midwest United States and frequently seen as a coinfection with other tick-borne illnesses such as Lyme disease.
- While often asymptomatic or mild in immunocompetent hosts, severe and life-threatening complications can occur, particularly in elderly or asplenic individuals.
- We present a case of severe babesiosis in a previously healthy septuagenarian initially diagnosed as a viral illness, and quickly worsened, leading to critical complications including spontaneous splenic rupture, renal failure, and subdural hematoma.

## Case description

- A 73-year-old, previously healthy male with a history of frequent visits to wooded areas in the Northeast United States presented with fever, nausea, and generalized body aches.
- His history of exposure to tick-infested areas was a significant factor in his diagnosis. Initially, he presented with non-specific complaints that resembled a viral illness. However, his condition quickly worsened, leading to severe acidosis, renal failure, and multi-organ failure with shock.
- The patient was subsequently found to have high-grade parasitemia seen on the complete blood count consistent with babesiosis.

- In addition to acute respiratory distress syndrome necessitating intubation, he was found to have a spontaneous splenic rupture with hemoperitoneum, requiring emergent splenic artery embolization.
- Due to the high-grade parasitemia burden of more than 10 %, the patient underwent apheresis treatment. His clinical course was further complicated by spontaneous subdural hematoma (SDH), secondary to severe thrombocytopenia and disseminated intravascular coagulation (DIC) associated with babesiosis.
- Throughout the hospital course, he also required continuous renal replacement therapy in the setting of anuria. The patient was treated with high-dose atovaquone and azithromycin along with doxycycline to treat coinfection with Lyme disease for which he also tested positive. He was successfully discharged from the intensive care unit.

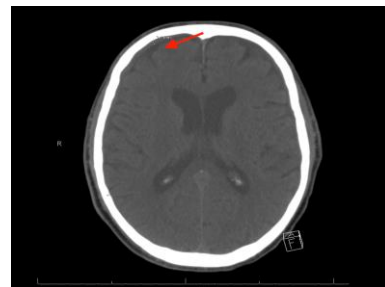


Figure 1: CT Head with Right Subdural Hematoma measuring 3.1 mm

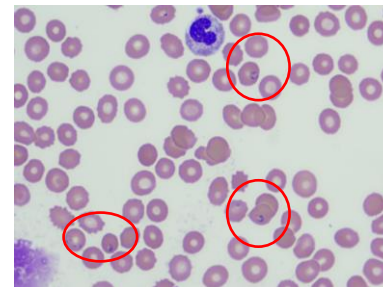


Figure 2: Ring-shaped intra & extra-erythrocytic forms suggestive of babesia

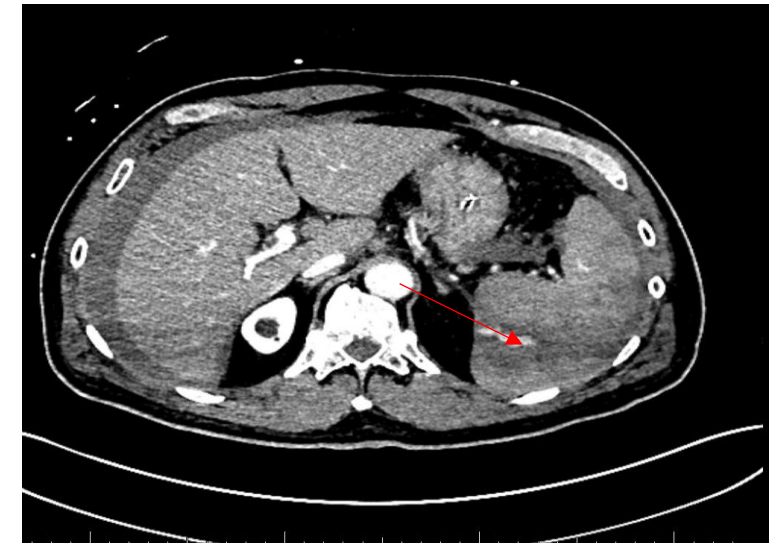


Figure 3: CT Abdomen/Pelvis showing Postero-Medial Splenic Hemorrhage

## Discussion

- The diagnostic challenges posed by non-specific initial symptoms are well-documented. In this case, the patient's symptoms mimicked a viral illness, leading to a delay in diagnosis until the patient re-presented in multi-organ failure secondary to complications directly linked to babesiosis.

## Conclusion

- This case report is a stark reminder of the potential severity of babesiosis and the crucial role of prompt diagnosis and treatment.
- The potential for rapid deterioration in babesiosis, even in immunocompetent hosts with intact spleen, is illustrated by this case.
- It emphasizes the need for healthcare providers to consider tick-borne illnesses in patients with compatible symptoms and exposure history, even if they appear previously healthy.