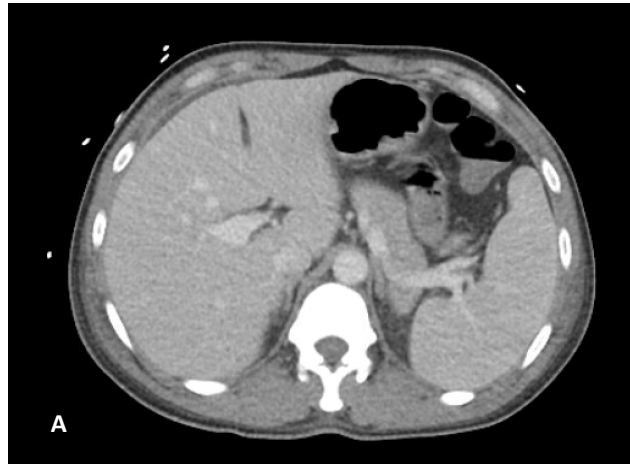


Ticking Time: Unraveling Anaplasmosis - A Case Report

INTRODUCTION

Anaplasmosis, a tick-borne disease, manifests across a spectrum from mild febrile states to severe, potentially life-threatening infections. Timely identification and management are of paramount significance. This report highlights a notable case of Anaplasmosis observed in Pennsylvania, USA.



CLINICAL COURSE

Empiric treatment with doxycycline was initiated. Infectious disease specialists were consulted and added Atovaquone and Azithromycin. A comprehensive infectious workup ensued - differentials included Babesiosis, Ehrlichiosis, Tularemia, Lyme disease, Malaria, Parvo B19, Dengue fever, Yersinia, Vibrio, Aeromonas, Rubella, HIV and Hepatitis. Hematology/oncology specialists were consulted for possible malignancy and hematologic disease.

A peripheral blood smear revealed atypical cells with anemia and thrombocytopenia and rare pelgeroid neutrophils. Subsequent testing with Polymerase Chain Reaction was positive for **Phagocytophilum DNA**.

The patient required low dose vasopressor support for 20 hours before his clinical status improved. He completed 10 days of Doxycycline for anaplasmosis and 7 days of empiric Atovaquone/Azithromycin before being safely discharged home.

CLINICAL DESCRIPTION

A previously healthy 43-year-old male presented to the emergency department with one week of fevers, chills and myalgias. His recent travel history was limited to the confines of Pennsylvania. Notably he frequented local fishing activities, most recently five days before presentation. In the emergency department, he was febrile at 104 degrees Fahrenheit, with blood pressure 96/49 mmHg, and heart rate 120 bpm. Computed tomography of the abdomen and pelvis revealed hepatosplenomegaly with liver measuring 20cm and spleen measuring 15cm in length (figure A).

A tick was found on his bed in the emergency department.

Persistent hypotension despite fluid resuscitation with 6.5L in the emergency department prompted his transfer to the intensive care unit for closer monitoring and vasopressor support.

NOTABLE LABS

Hemoglobin	10.3 g/dL
Platelets	44 K/uL
Creatinine	1.4 mg/dL
Lactate dehydrogenase	358 U/L
Sedimentation rate	22 mm/HR
C-reactive protein	16.3 mg/dL

DICUSSION

Anaplasmosis (granulocytic anaplasmosis) stems from *Anaplasma phagocytophilum*, an intracellular, gram-negative bacteria. Its most prevalent vectors are the *Ixodes scapularis* and *Ixodes pacificus* tick in the northeastern and western US, respectively. Mammalian species are a reservoir for this bacterium.

About 36 percent of US reported cases lead to hospitalization, with 7% requiring ICU level of care. Overall fatality rate is around 1%. Reported number of cases is increasing, with the highest incidence reported during summer months in males above the age of 40.

A thorough history is pivotal in considering this diagnosis. Polymerase chain reaction (PCR) has a sensitivity of 67-90% within the first week of infection. Peripheral blood smear, the quickest test, can reveal morulae (intravacuolar inclusions) within neutrophils. Standard of treatment is doxycycline for 5-14 days. Most hypotensive patients require a few hours of vasopressor support. Untreated cases often resolve over one month.