

# Fever, Acute Kidney Injury (AKI), Thrombocytopenia & Hemolytic Anemia With Schistocytes – Babesiosis Mimicking TTP Symptomology

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# Fever, Acute Kidney Injury (AKI), Thrombocytopenia & Hemolytic Anemia With Schistocytes – Babesiosis Mimicking TTP Symptomology

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## Background

- Babesiosis is an infectious disease predominantly caused by genus *Babesia microti*, with presentation most common in individuals with splenectomy and/or immunosuppression – often manifesting systemic signs and symptoms of infection with peripheral count indicative of thrombocytopenia with transaminitis.
- Herein, we describe a case of Babesiosis with presentation consistent with likely TTP in an immunocompetent, nomosplenic gentleman.

## Case Presentation

- An 82 year old healthy Caucasian male was admitted with chief complaint of fatigue, lightheadedness, subjective fevers, generalized abdominal pain and poor appetite for two weeks.
- Upon admission, he was found to be febrile at 101.1F with new-founded anemia, thrombocytopenia and AKI with normal WBC.
- Further testing was consistent with an autoimmune hemolytic process with blood cultures negative. A peripheral smear performed showed rare schistocytes. Given concern for TTP, a repeat smear performed showed intra and extracellular inclusions with parasitic cultures positive for *B. microti*.
- Treatment was initiated with atovaquone, azithromycin and doxycycline for potential co-infections.

Table 1	
Lab	Value
Sodium	142
Potassium	3.9
Chloride	100
Bicarbonate	24
<b>BUN to Creatinine</b>	<b>35/1.32 (H)</b>
Glucose	124
WBC	10.5
<b>H &amp; H</b>	<b>9.1 &amp; 31 (L)</b>
<b>Platelet</b>	<b>85 (L)</b>
<b>Haptoglobin</b>	<b>25 (L)</b>
<b>LDH</b>	<b>252 (H)</b>
<b>Parasitic Cultures</b>	<b>+ For <i>B. microti</i></b>

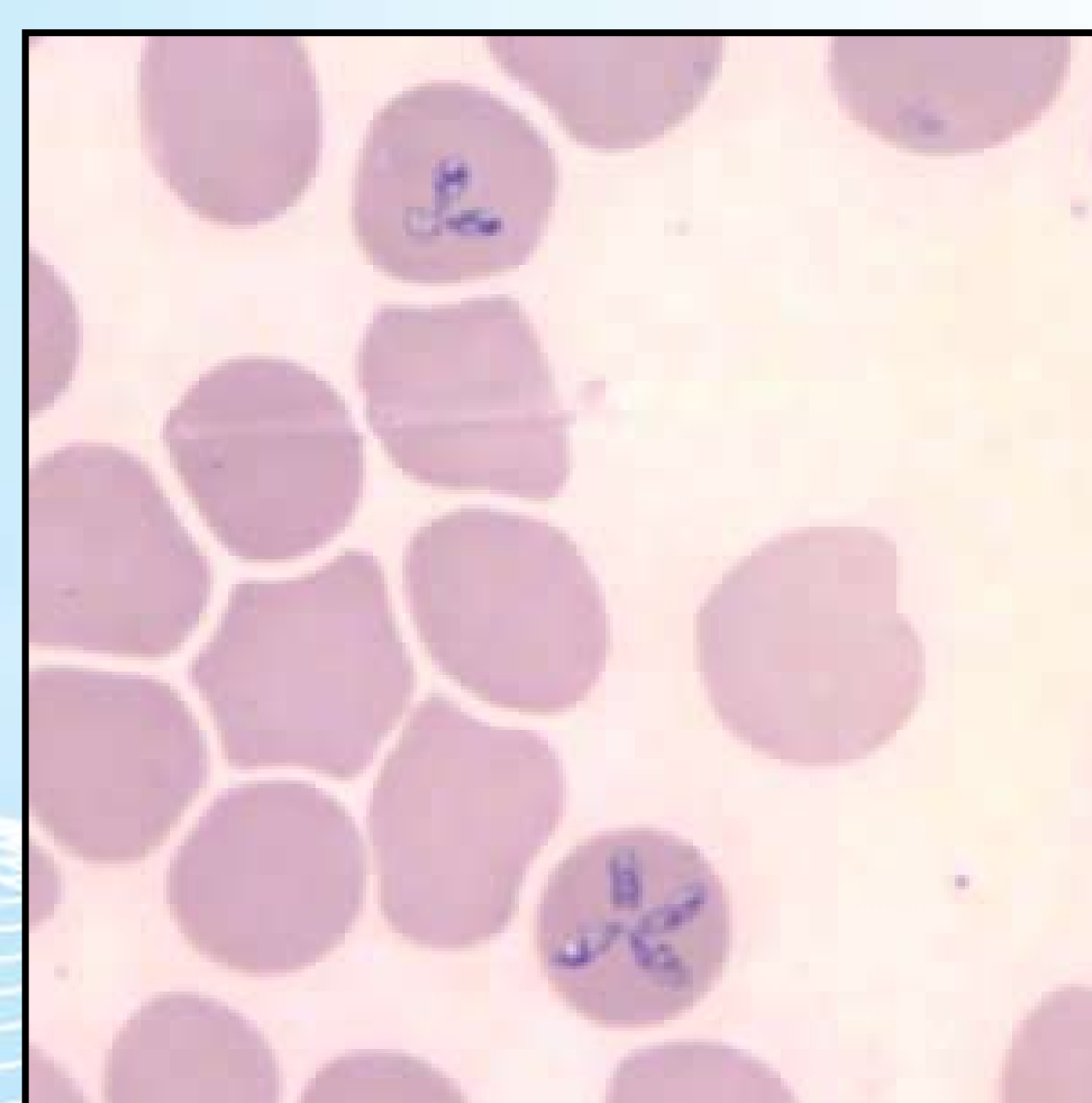


Figure 1: Pictorial representation of *Babesia microti* in thin blood smear with classic inclusions as traditionally visualized.

## Discussion

- In an elderly patient that presents with fevers, AKI, thrombocytopenia and hemolytic anemia; with smears showing schistocytes – a diagnosis of TTP is strongly suspected, especially with concern for TTP due to underlying malignant process. However, in our patient, smears showed schistocytes with intra and extracellular inclusions with parasite cultures diagnosing *B. microti* – with 1% parasitemia.
- Given this finding, it becomes imperative in keeping this parasitic infection as part of our differential diagnosis in patients presenting with TTP like symptoms. Prompt recognition with peripheral smear morphology can prevent inappropriate treatment and prevent progression of disease.
- TTP Pentad
  - MAHA (Microangiopathic Hemolytic Anemia)
  - Thrombocytopenia
  - Neurologic abnormalities
  - Renal abnormalities - AKI most common
  - Fever
- A complete pentad of TTP is reported to occur in <5% of cases – the most common being MAHA and Thrombocytopenia.

## References:

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- 3 George JN. How I treat patients with thrombotic thrombocytopenic purpura: 2010. Blood 2010; 116:4060.

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