Introduction:

Anaplasmosis is tick borne illness commonly presenting with non-specific symptoms like fevers, chills, headache, myalgias, and occasional respiratory or gastrointestinal problems . Rashes are rarely reported in Anaplasmosis (<10% of cases) and are more common in other tick-borne illnesses (like Lyme, Ehrlichiosis, and Rocky Mountain Spotted Fever). The presence of rash in a suspected tick-borne illness warrants detailed testing for possible coinfections and uncommon presentation of diseases like Anaplasmosis.

Case Presentation:

A 60-year-old male from Eastern Pennsylvania, presented with high-grade fever, chills, night sweats, and myalgias for the past two weeks. There were no additional gastrointestinal or respiratory symptoms. He took a short course of Azithromycin during the first week without improvement. Further history revealed that he spent a lot of time outdoors but had no recollection of a tick bite. He met 3/4 SIRs criteria upon admission for fever, leukopenia and tachycardia. On physical examination, there was a mildly erythematous confluent reticular maculopapular rash on his chest and back for the past 4 days which was now resolving. No lymphadenopathy or bulls-eye rash was noted. Labs revealed anemia (9.6 g/dL), leukopenia (3.1 10E3/uL), transaminitis (AST 278, ALT 253), elevated ESR (130) and CRP (12.42). Babesia antibodies and blood parasite smear were negative. A tick panel was sent to check for Lyme, Ehrlichia and Anaplasma antibodies. Treatment was empirically started with Doxycycline 100 mg with significant improvement of his condition in the following few days. Final antibody titers showed acute coinfection of Anaplasma (IgM 1: 320) and Lyme disease (IgM 2.93). Anaplasma and Lyme disease respond well to oral Doxycycline, and this was reflected in the clinical improvement of our patient.

Discussion:

Anaplasmosis commonly presents with fever, chills, myalgias, arthralgias and occasional nausea, diarrhea or cough. Ixodes tick can transmit Anaplasmosis, Lyme, Ehrlichiosis and Powassan encephalitis leading to increased risk of coinfections. The presence of rash in Anaplasmosis is mostly attributed to a coinfection with Lyme disease but the absence of characteristic bull's eye rash of Lyme accounts for uncommon Anaplasmosis rash. Therapy with Doxycycline should be initiated based on presumptive diagnosis while waiting for final confirmation.