

Tick bite causes 3 diseases in elderly woman

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According to Kumar and colleagues, the woman was an avid gardener, who had a history of COPD (chronic obstructive pulmonary disease) and high blood pressure. She was admitted to the hospital with dyspnea, fatigue, and a cough productive of yellowish mucoid sputum.

The patient also had significant altered mental status, pallor, and peripheral edema. A lung examination revealed bibasilar crackles, [Kumar explains](#). [1]

The woman, who had no history of a rash or tick bite, was treated empirically for community-acquired pneumonia. And was prescribed ceftriaxone and azithromycin.

However, lab tests later revealed the presence of 3 tick-borne pathogens. “We present a case of triple infection with babesiosis, Lyme disease, and anaplasmosis treated with antibiotics and red blood cell (RBC) exchange (erythrocytapheresis),” explains Kumar.

1) Babesia ? A tiny parasite that infects the red blood cells.

“A peripheral blood smear revealed the presence of intracytoplasmic parasites consistent with Babesia,” writes Kumar. Consequently, the woman was started on azithromycin and atovaquone.

Further testing revealed that she had severe babesiosis. Her parasitic load was so high (9.04%) that she required a red blood cell (RBC) exchange (erythrocytapheresis).

Repeat testing, however, found the parasitic load remained high (6.54%), which required a second round of RBC exchange.

“Antimicrobials were changed to clindamycin, quinine, and doxycycline for a total of 14 days,” writes Kumar.

2) Borrelia burgdorferi ? The bacteria that causes Lyme disease. Serologic tests were positive. The patient was prescribed doxycycline.

3) Anaplasma ? The bacteria that causes anaplasmosis, formerly known as human granulocytic ehrlichiosis (HGE). Anaplasma titers were positive.

Authors suggest: “Patients presenting with an atypical clinical picture of a single pathogen or a lack of improvement with antibiotics after 48 hours require further testing for the presence of other infections.”

“A delay in the diagnosis can lead to an increased risk of complications and disease duration,” writes Kumar and colleagues.

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References:

1. Kumar M, Sharma A, Grover P. Triple Tick Attack. Cureus. 2019;11(2):e4064.

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