

Neurologic manifestations, such as apathy, delirium, dizziness, and coma, are possible complications of *Borrelia recurrentis* infection.

Cardiopulmonary Deficits

Dead heart/lungs

Cardiopulmonary manifestations are common. These manifestations can range from mild nonproductive cough to acute respiratory distress syndrome and myocarditis.

Hematologic Disorders

He-man-blood Disordered

Patients with this infection can present with hematologic disorders. This can be due to impaired hepatic production of clotting factors, blockage of small vessels, and thrombocytopenia.

Diagnosis

Blood Smear

Blood Smear on Glass

Thin and thick smears of blood can help in the identification of the organism, and this test is used for screening purposes.

Polymerase Chain Reaction (PCR)

Polly-mirror with Chain

If *B. recurrentis* is not identified on smear, but there is still a high clinical suspicion for disease polymerase chain reaction (PCR) testing should be performed.

Treatment

Beta Lactams

Black-beta-fish

Beta lactams such as penicillin and ceftriaxone can be used for the treatment of this infection. Adults usually receive ceftriaxone while children or pregnant patients usually receive amoxicillin and cefuroxime. In patients with spirochetal infections, initiation of antibiotic therapy often results in lysis of bacterial cell membranes, this releases large amounts of bacterial toxins (e.g., lipoprotein) into the bloodstream which results in fever, hypotension, tachycardia, headache, and flushing. This self-limited, febrile reaction usually occurs within the first 24 hours of antibiotic initiation and is called Jarisch–Herxheimer reaction, while symptoms usually resolve within 12-24 hours after the onset of symptoms, NSAIDs can reduce the severity and the duration of the symptoms and are often administered if symptoms are severe.

Doxycycline

Dachshund-cycling

Doxycycline inhibits bacterial protein synthesis by binding to the 30S ribosomal subunit. Doxycycline can be used for the treatment of *B. recurrentis* infection.