



LYME DISEASE

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ABSTRACT

Lyme disease, also known as Lyme borreliosis, is an infectious disease caused by bacteria of the *Borrelia* type. The most common sign of infection is an expanding area of redness, known as erythema migrans, that begins at the site of a tick bite about a week after it has occurred. The rash is typically neither itchy nor painful. Approximately 25-50% of infected people do not develop a rash. Other early symptoms may include fever, headache and feeling tired. If untreated, symptoms may include loss of the ability to move one or both sides of the face, joint pains, severe headaches with neck stiffness, or heart palpitations, among others. Months to years later, repeated episodes of joint pain and swelling may occur. Occasionally, people develop shooting pains or tingling in their arms and legs. Despite appropriate treatment, about 10 to 20% of people develop joint pains, memory problems, and feel tired for at least six months.

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INTRODUCTION

Definition

An inflammatory disease that is caused by the bacterium *Borrelia burgdorferi*, which is transmitted to humans by the deer tick.

Signs and Symptoms

- Bull's eye rash or erythema migrans
- Fever, headache
- Lethargy, Neck stiffness
- pain and swelling in the joints (inflammatory arthritis)
- numbness and pain in your limbs
- paralysis of your facial muscles
- memory problems and difficulty concentrating
- heart problems-such as inflammation of the heart muscle (myocarditis) or sac surrounding the heart (pericarditis)
- heart block and heart failure
- inflammation of the membranes surrounding the brain and spinal cord (meningitis) – which can cause a severe headache, a stiff neck and increased sensitivity to light.

Risk Factors

1. The New Forest and other rural areas of Hampshire
2. The South Downs, parts of Wiltshire and Berkshire

3. The Lake District

4. The Scottish Highlands

Causes

- *Borrelia*capularis
- *Ixodes*capularis
- Mammals & birds by ticks

Pathophysiology: due to the causes bite of an infected *Ixodes* tick *salaiva* accompanies the spirochete – this allows the bacteria to survive & eventually spread throughout the body-spread via blood stream to joints, heart, nervous system, skin sites - Lyme disease.

Diagnostic Evaluation

- History collection
- Physical examination
- Serological blood tests. Eg: ELISA, Western blot
- Culturing
- Polymerase chain reaction
- Cerebrospinal fluid specimens
- High titers IgG or IgM.

Treatment

- Antibiotics: Doxycycline, Amoxicillin, Azithromycin, Cefotaxime.
- Symptomatic treatment.

Prevention

- keeping to footpaths and avoiding long grass when out walking

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- wearing appropriate clothing in tick-infested areas (a long-sleeved shirt and trousers tucked into your socks)
- wearing light-coloured fabrics that may help you spot a tick on your clothes
- using insect repellent on exposed skin
- inspecting your skin for ticks, particularly at the end of the day, including your head, neck and skin folds (armpits, groin, and waistband) - remove any ticks you find promptly
- checking your children's head and neck areas, including their scalp
- making sure ticks are not brought home on your clothes

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