International Scholars Journals

African Journal of Infectious Diseases Research , ISSN 2756-3340, Vol. 10 (3), pp. 001, September, 2023.
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Commentary

Relapsing fever: An ancient and persistent threat

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Received: 14-Aug-2023, Manuscript No. AJIDD-23-112727; Editor assigned: 17-Aug-2023, Pre QC No. AJIDD-23-112727 (PQ); Reviewed: 01-Sep-2023, QC No. AJIDD-23-112727; Revised: 08-Sep-2023, Manuscript No. AJIDD-23-112727 (R); Published: 15-Sep-2023

DESCRIPTION

Relapsing fever is an intriguing and ancient bacterial infection that has affected humans for centuries. Caused by various species of spirochete bacteria from the genus Borrelia, this disease is characterized by recurrent bouts of fever, often accompanied by a range of symptoms. In this article, we will delve into the history, causes, symptoms, diagnosis, treatment, and prevention of relapsing fever.

A historical perspective

Relapsing fever is not a recent discovery. It has been described in historical texts and accounts dating back to ancient times, with references in medical literature as far back as the 14th century. One of the earliest recorded instances of relapsing fever in the United States occurred during the Civil War, affecting soldiers on both sides of the conflict.

Causative agents

Two main species of Borrelia are responsible for causing relapsing fever in humans.

Borrelia recurrentis: This species is transmitted to humans by the body louse (Pediculus humanus corporis) and is responsible for louse-borne relapsing fever. Outbreaks of this form of the disease are often associated with crowded and unsanitary conditions, such as refugee camps.

Borrelia hermsii, Borrelia turicatae, and others: These species are primarily transmitted to humans through the bites of infected soft ticks. These ticks are found in various regions, including North America, Europe, and Africa. In North America, tick-borne relapsing fever is a notable concern.

Transmission

Relapsing fever bacteria are transmitted to humans primarily through the bite of infected vectors: lice or ticks. The bacteria can also be transmitted through transfusion of contaminated blood or from an infected mother to her unborn child.

Symptoms

Relapsing fever is characterized by recurring episodes of fever separated by asymptomatic periods. Each febrile episode can last for several days and is often accompanied by symptoms such as headache, muscle and joint pain, chills, nausea, and vomiting. A characteristic feature of relapsing fever is the presence of spirochetes in the bloodstream, which can be detected during febrile episodes.

Diagnosis and treatment

Diagnosing relapsing fever typically involves identifying spirochetes in a blood smear during a febrile episode. Serologic tests and Polymerase Chain Reaction (PCR) assays can also confirm the presence of Borrelia DNA.

Treatment for relapsing fever often involves antibiotics, such as doxycycline or tetracycline, which are effective against spirochete bacteria. However, prompt diagnosis and treatment are essential to prevent complications.

Prevention

Preventing relapsing fever primarily revolves around controlling the vectors.

Louse-borne relapsing fever: Improved hygiene, including regular bathing and wearing clean clothes, can help prevent body lice infestations. Treating affected individuals with appropriate antibiotics can also limit the spread of the disease.

Tick-borne relapsing fever: Reducing exposure to tick-infested areas, wearing protective clothing, and using tick repellents can help prevent tick bites. Inspecting for ticks and promptly removing them can also reduce the risk of infection.

Relapsing fever, a disease that has been documented throughout history, remains a concern in various parts of the world today. While advances in healthcare have improved our ability to diagnose and treat this condition, its persistence in certain regions and potential for severe complications underscore the importance of continued research, surveillance, and public health efforts to control and prevent relapsing fever.

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