



What

Tickborne spotted fever rickettsioses are the most frequently reported travel-associated rickettsial infections. Flea-associated rickettsioses are globally distributed, particularly in coastal areas with large rodent populations. Epidemic typhus can occur in refugee camps or among homeless populations where body lice are common.



Who

Rickettsia infection is caused by bacteria and is generally associated with poverty. There are different types of Rickettsia bacteria, each with distinct geographic distributions. These bacteria can cause different types of diseases. Rickettsial diseases are subdivided into the following groups: the spotted fever group, the typhus group (including murine, scrub, and epidemic typhus), and a miscellaneous group. For travelers, those who engage in outdoor activities and are exposed to fleas, lice, mites, or ticks are at greater risk.



Where and when

Rickettsial infections are found worldwide and are a common, treatable cause of fever and rash in travelers. Although present globally, specific types may be more common in certain regions. The bacteria are usually transmitted through fleas, lice, ticks, and mites, and transmission can also occur via flea feces entering the body through broken skin or inhalation. Black and brown rats are the main reservoirs for these bacteria. Disease is often associated with poverty, poor sanitation, and limited access to healthcare.

Prevention

No vaccine is available to prevent rickettsial infections, and antibiotic prophylaxis is not recommended. Antimicrobial agents should not be given to people without symptoms. Travelers can reduce their risk by minimizing exposure to fleas, lice, mites, ticks, and animal reservoirs (particularly dogs and rats). Using insect or tick repellents properly, performing self-examinations after visiting areas with high vector presence, and wearing protective clothing are effective prevention methods.



Treatment

Because some rickettsial infections can progress quickly to severe illness, treatment should begin as soon as infection is suspected. Immediate antibiotic treatment (most commonly with doxycycline) is recommended for patients of all ages.

Symptoms

Typical symptoms of rickettsial infections include fever, headache, and sometimes a skin rash, usually appearing 5-10 days after infection. In scrub typhus and some spotted fever group rickettsial infections, an eschar—a characteristic dark, crusty skin lesion—often develops at the site of the arthropod bite. Acute complications can include involvement, of different organ systems, such as the lungs, kidneys, liver, brain and heart. These diseases vary in severity, but many can be life-threatening if not treated early with appropriate antibiotic therapy.



In case of infection

Rickettsial diseases are challenging to diagnose. Currently, diagnosis is primarily made by detecting antibodies in the blood. With appropriate treatment, the disease outcome is generally favorable.