

Babesia

Introduction

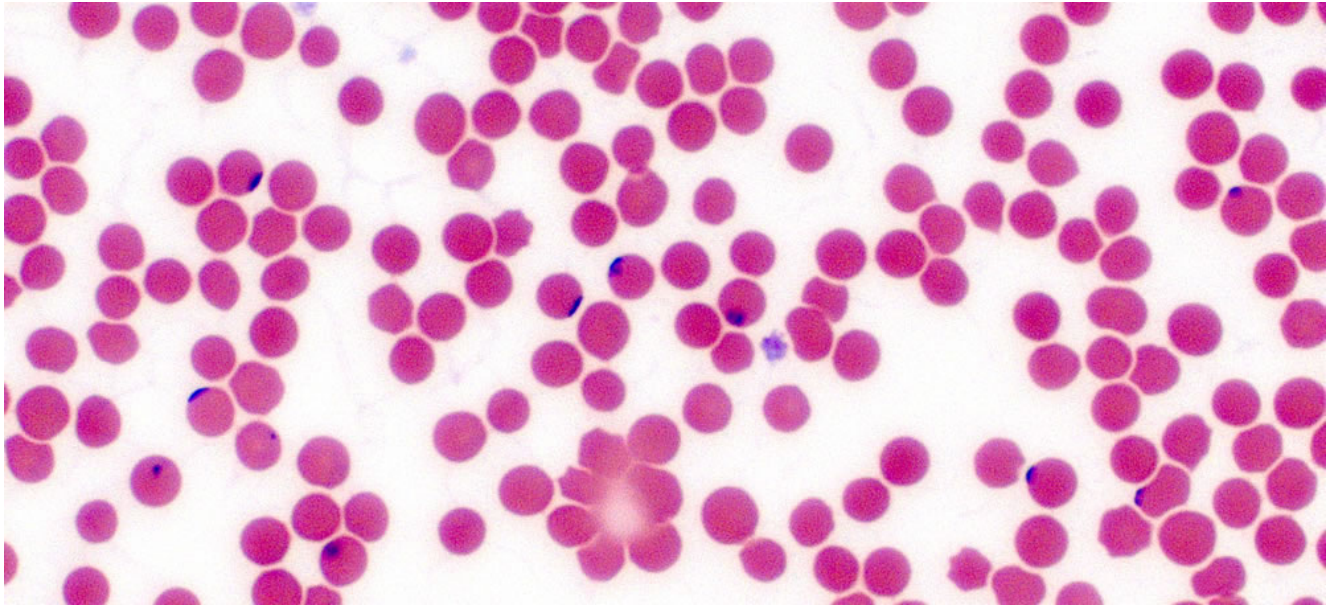
Babesia is a malaria-like parasite, also called a “piroplasm,” that infects red blood cells. Scientists believe *Babesia microti* is the most common piroplasm infecting humans, but they have identified over twenty piroplasms carried by ticks. In addition to transmission by a tick, babesia can be transmitted from mother to unborn child or through a contaminated blood transfusion. Currently, most blood banks do not screen donated blood for babesia.

The first case of babesiosis was reported from Nantucket Island, Massachusetts, in 1969. Since the late 1980s, the disease has spread from the islands off the New England coast to the mainland. Cases have also been reported across the United States, Europe, and Asia.

Symptoms

Symptoms of babesiosis are similar to those of Lyme disease but babesiosis more often starts with a high fever and chills. As the infection progresses, patients may develop fatigue, headache, drenching sweats, muscle aches, chest pain, hip pain and shortness of breath (“air hunger”). Babesiosis is often so mild it is not noticed but can be life-threatening to people with no spleen, the elderly, and people with weak immune systems. Complications include very low blood pressure, liver problems, severe hemolytic anemia (a breakdown of red blood cells), and kidney failure.

Diagnosis and Treatment



Sometimes, babesia can be detected in blood examined under a microscope. However, this method is reliable only in the first two weeks of the infection. Commercial tests currently detect only two strains of Babesia and there are likely many strains yet to be discovered. The PCR (polymerase chain reaction) test can detect babesia DNA in the blood. The FISH (Fluorescent In-Situ Hybridization) assay can detect the ribosomal RNA of Babesia in thin blood smears. The lab can also test the patient's blood for antibodies to Babesia. It may be necessary to run several different tests, and negative results should not be used to rule out treatment.

Babesiosis is typically treated with a combination of anti-malarial drugs and antibiotics. Relapses sometimes occur after treatment and must be retreated.