

# Bartonellosis

## Traveler Summary

### Key Points

- Bartonellosis is a bacterial infection common in certain valleys in the Andes Mountains in central Peru and parts of Ecuador, acquired through the bite of an infected sand fly.
- Risk occurs in travelers going to affected areas who will have evening and nighttime outdoor exposure.
- Symptoms include fever, malaise, headaches, weakness, muscle aches, and exhaustion.
- Consequences of infection include enlarged kidney and spleen, swollen lymph glands, mental status changes, and fluid retention.
- Prevention includes wearing long sleeves and long pants as well as observing personal protective measures against sand fly bites.
- No vaccine or preventive drugs are available.

### Introduction

Bartonellosis, if left untreated, is a potentially fatal bacterial infection of the red blood cells, transmitted by the bite of a sand fly carrying the Bartonella bacteria. The acute phase of the disease causes high fever and anemia; a later, chronic phase is characterized by distinctive skin sores that look like warts.

### Risk Areas

Bartonellosis occurs in many valleys of the South American Andes, mainly in central Peru and in some parts of Ecuador, at elevations ranging from 500 to 3,200 m (1,600-10,500 ft) above sea level. Infected areas include popular destinations in the Sacred Valley of the Incas in Peru.

### Transmission

Bartonellosis is transmitted through the bite of infected sand flies (about one-third the size of most mosquitoes) in affected areas, where transmission seems to occur throughout the year. Most of the sand flies' biting activity is at dusk, at night, or before sunrise but can also occur during the day when disturbed in their daytime resting areas. The bite is usually painless but can become very itchy shortly after it occurs.

### Risk Factors

The risk for short-term travelers is low, but the recent increase in adventure travel and eco-tourism to endemic areas may increase the possibility of transmission to travelers, especially if insect precautions during sand fly biting times are not adhered to. The highest risk is for persons sleeping outside without suitable clothing, a common scenario in the arid, hot climates favored by the vector sand flies.

### Symptoms

Bartonellosis typically involves 2 stages: acute and chronic.

The acute phase typically develops 3 to 4 weeks after infection, but can take as long as 16 weeks to appear. Symptoms include fever, malaise, headaches, weakness, muscle aches, and exhaustion due to extreme anemia.

### Consequences of Infection

Consequences of acute infection include enlarged kidney and spleen, swollen lymph glands, and mental status changes. Seizures and fluid retention can occur in some patients. Death occurs in about 90% of untreated cases.

The chronic phase begins 2 to 8 weeks after recovery from the acute phase (or sometimes without a previously recognizable acute phase) and is characterized by distinctive skin sores that look like warts.

## Need for Medical Assistance

Travelers who develop fever, dark urine, or pale skin (due to anemia) should seek urgent medical attention. Travelers should mention bartonellosis to treating physicians, who often think of malaria in a traveler exposed in Peru. Fever and anemia from jungle areas are more likely to be caused by malaria, whereas fever and anemia from the Andean valleys are more likely to be caused by bartonellosis. Acute bartonellosis is a very serious, potentially fatal illness, but early diagnosis and treatment with common antibiotics can drastically reduce the potential for a fatal outcome.

## Prevention

### Nonvaccine

Wear long sleeves and long pants and observe daytime and nighttime personal protective measures against sand fly bites. Observe standard insect precautions, but remember that the tiny sand flies can penetrate typical mosquito nets. DEET-based insect repellents are generally effective.

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