Coccidioidomycosis, also called Valley Fever, is a fungal disease caused by *Coccidioides immitis*. These organisms live in the soil of semiarid areas. It is endemic in the southwestern United States, especially California's Central Valley. It has been known to infect humans, dogs, cattle, livestock, llamas, apes, monkeys, kangaroos, wallabies, tigers, bears, badgers, otters and marine mammals. Of people who live in an endemic region, about 10-50% will have evidence of exposure to *Coccidioides* and there are roughly 100,000 new cases each year.

Infections and Symptoms

The infectious form of the fungus forms as the fungus grows in the environment. Infection occurs by inhaling fungal spores that become airborne after disturbance of contaminated soil. *Coccidioides* is not spread from person to person, or from animals to people. The fungus changes its form when it infects a person, and this form cannot be transmitted from one person to another.

About 60% of infections do not cause any symptoms. People who develop symptoms may experience a flu-like illness, with fever, cough, headache, rash and muscle aches. Most people make a full recovery, within weeks to months of symptom onset, but a small number of people may develop chronic pulmonary infection or widespread disseminated infection. When the infection spreads outside of the lungs, it most commonly results in skin lesions, central nervous system infection, such as meningitis, and bone and joint infection. Serious complications include severe pneumonia, lung nodules, and disseminated disease, where the fungus spreads throughout the body. The disseminated form can devastate the body, causing skin ulcers and abscesses to bone lesions, severe joint pain, heart inflammation, urinary tract problems, meningitis, and death.

At Risk Individuals

Most of the people who get the disease are people who live in or visit places where the fungus is in the soil and who engage in activities that expose them to dust (such as construction, agricultural work, military field training and archeological exploration).

Some people are at increased risk for developing disseminated infection: people of African-American, Asian or Filipino descent appear to be at increased risk, and pregnant women during the third trimester. At particular risk are immunocompromised persons.

Prevention and Treatment

Avoidance of dusty environments in endemic regions may help to prevent infection. In addition, persons at risk for severe disease should avoid activities that may result in dust exposure, such as digging, farming, and construction.

Symptoms from the acute infection may resolve on their own without treatment. However, some doctors prefer to prescribe antifungal drugs to treat patients with acute, uncomplicated coccidioidomycosis. There is not enough information about whether treating acute, uncomplicated pulmonary coccidioidomycosis is beneficial or not, although many experts feel that persons at risk for developing severe disease should receive treatment. Antibacterial drugs do not treat coccidioidomycosis.

In more severe infections, treatment with antifungal drugs is necessary. People who have pneumonia from coccidioidomycosis affecting both lungs, people who have disseminated disease, and people who have chronic pneumonia all need treatment.

References

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