LEPROSY

(Hansen Disease, Hanseniasis)

REPORTING INFORMATION

- Class A(3)
- Report by end of the work week
- Confidential Case Report Card (3812.11 rev. 12/81), lab report (3833.11), or telephone
- Requires completion of CDC Leprosy Surveillance Form (CDC 52.18 rev. 6/93). To be send by the local health department to the Ohio Department of Health, Infectious Disease Investigation, 246 N. High Street, PO Box 118, Columbus, OH 43266-0118.

AGENT

Mycobacterium leprae (Hansen's bacillus)
M. leprae grows and multiplies in humans, footpads of mice, armadillos, and immunosuppressed rodents. It is the slowest growing bacterial pathogen and is not cultivated in vitro.

CASE DEFINITION

Clinical description

A chronic bacterial disease characterized by the involvement primarily of skin as well as peripheral nerves and the mucosa of the upper airway. Clinical forms of Hansen disease represent a spectrum reflecting the cellular immune response to *Mycobacterium leprae*. The following characteristics are typical of the major forms of the disease:

Tuberculoid - one or a few well-demarcated, hypopigmented, and anesthetic skin lesions, frequently with active, spreading edges and a clearing center; peripheral nerve swelling or thickening may also occur

Lepromatous - a number of erythematous papules and nodules or an infiltration of the face, hands, and feet with lesions in a bilateral and symmetrical distribution that progresses to thickening of the skin

Borderline (dimorphous) - skin lesions characteristic of both the tuberculoid and lepromatous forms

Indeterminate - early lesions, usually hypopigmented macules, without developed tuberculoid or lepromatous features.

Laboratory criteria for diagnosis

Demonstration of acid-fast bacilli in skin or in dermal nerve, obtained from the full-thickness skin biopsy of a lepromatous lesion.

Case classification

Confirmed: A clinically compatible case that is laboratory confirmed.

SIGNS AND SYMPTOMS

See case definition.

DIAGNOSIS

There are no established laboratory tests for leprosy. Diagnosis is based on clinical findings, histopathologic findings (i.e., acid-fast bacilli on a biopsy specimen), or both. For information regarding this disease, contact the National Hansen Disease Center (NHDC) at 1-800-642-2477.

EPIDEMIOLOGY

Source

Humans the only reservoir of proven significance.

Occurrence
World prevalence estimates place the total at about 15 million cases. In some areas, 3%-4% of the population is affected. High rates are found in Asia (especially Southeast Asia and India), tropical Africa, and some areas in Latin America. Indigenously acquired leprosy is concentrated primarily in Louisiana and Texas. Leprosy is rarely reported in Ohio and is almost always seen in immigrant or refugee populations.

Mode of Transmission
Leprosy is not highly communicable. Only about 5% of spouses living with a patient with leprosy develops the disease. Because *M. leprae* remains viable in dried secretions for up to seven days, fomites might play a role. Long-term, personal, skin-to-skin contact is considered the most common mode of transmission. Bacilli enter the body by way of the mucous membranes of the nose or mouth or through abrasions in the skin.

Period of Communicability
Infectiousness is considered possible as long as morphologically normal bacilli are demonstrated. Infectiousness can continue for two weeks to three months after effective treatment is started.

Incubation Period
The estimated period is 9 months to 20 years (approximately 4 years average).

PUBLIC HEALTH MANAGEMENT

Case

Investigation
Complete the CDC Leprosy Surveillance Form and submit it to ODH (see Reporting Information above)

Treatment
In vitro testing of drug sensitivity is not possible. Disease resistant to sulfone is now being reported with increasing frequency. The recommended chemotherapeutic regimens for leprosy are variable and changing. Consultation and free basic drugs may be obtained by contacting the National Hansen Disease Center (NHDC) toll-free l-800-642-2477.

Isolation
None required for tuberculoid leprosy; contact isolation for lepromatous leprosy. No restrictions in employment or attendance at school are indicated for patients receiving adequate treatment and regarded as noninfectious. Compulsory segregation of patients with leprosy is no longer required in the United States.

Contact
Periodic examination of household and other close contacts should be made at 6-12 month intervals for at least five years after the last contact with an infectious case.

Prevention and Control
Some studies have shown a possible benefit in some types of leprosy of BCG immunization or chemoprophylaxis with dapsone for at least three years to contacts under 25 years of age. Consultation with the NHDC at Carville, LA, should be sought before instituting either of these measures.