

LEPROSY

DEFINITION

Leprosy is a chronic infectious and communicable disease caused by *Mycobacterium leprae*. Its principal lesions occur in the cooler tissues of the body; skin, superficial nerves, nose and larynx, pharynx, etc.

INCIDENCE

- Worldwide , two to three million people are estimated to be permanently disable because of leprosy. India has the greatest number of cases , with brazil second and indonesia third.
- Children are more susceptible then adult.
- A family history of leprosy probably means highest susceptibility to infection .

TYPES

- ❑ Lepromatous leprosy: Generalized form of disease and is found in individuals with low degree of resistance. Skin lesions appear as yellow or brown infiltrated nodules that affect the mucous membranes of the eyes, nose, and throat .
- ❑ Tuberculoid leprosy: This is a localized form of disease and is found in patients with high degree or resistance. Skin lesions appear as light red or purplish spots.

Conti.....

- ❑ Borderline type : In this type of leprosy the lesions produced possess characteristics of both lepromatous and tuberculoid lesions .
- ❑ Indeterminate type : In this type of leprosy the lesions produced often resemble maculo – anesthetic patches which are neither characteristics of lepromatous nor tuberculoid type .

Cause and risk factor

➤ **Cause** : 1) *Mycobacterium leprae*

2) Genetics : several genes have been associated with a susceptibility to leprosy .

➤ **Risk factors** :

1) Living in areas with polluted water and poor diet.

2) Immunocompromised people .

3) Travel to an area that has experienced a leprosy attack.

4) People who handle certain animal that are known to carry the bacteria (african chimpanzee , armadillos) are at high risk .

5) Those who live in the areas where leprosy is endemic.

SIGN AND SYMPTOMS

- Numbness and loss of touch, pain, temperature sensation .
- Granulomas of the nerves ,respiratory tract ,skin and eyes
- Painless ulcer
- Skin lesions
- Loss of digits
- Facial disfigurement

PATHOPHYSIOLOGY

M.Laprae enters the body(skin,nose,etc)



attack

Peripheral nerves



Bind to schwann cells of axon



Demyelination of nerve





Loss of axonal conductance



Deformity(loss of pain,
temperature,touch,sensation)

TRANSMISSION

- Droplet infection : leprosy is believed to transmit through nasal discharge .
- Contact infection : studies indicate that leprosy is transmitted through direct skin contact.
- Vector –born infection.
- Trough placenta and milk .

DIAGNOSIS

- Clinical examination

- Interrogation

- Physical examination

- Bacteriological examination

- Smear (scrapings from lesions , nasal mucosa, nerve biopsy ,etc)

- Routine test

- CBC , LFT , Creatinine test

- Other test

- Lepromin test

- PCR

complication

- ◇ Partial or complete deformity / handicap .
- ◇ Complete isolation from the society .
- ◇ Social and mental tension.
- ◇ Sensory loss .
- ◇ Paralysis.
- ◇ Muscle weakness .
- ◇ Progressive disfigurement (eyebrow lost ,
disfigurement of the toes , fingers and nose)
- ◇ Loss of manpower / national loss.



MANAGEMENT

□ MEDICAL MANAGEMENT :

- Multidrug therapy : rifampicin , dapsone , clofazimine , ethionamide , quinolones , minocycline , etc are used .
- Corticosteroids : these are used to treat nerve damage associated with leprosy
- Aspirin and thalidomide are used to control inflammation.

Conti...

□ Surgical management:

- Neural surgery
- Nerve grafting
- Amputation
- Cosmetics surgery :
 - nasal reconstruction
 - Removal of excess skin
 - Replacement of eyebrows