



Leprosy (Hansen's Disease) - Current Scenario in the State of Andhra Pradesh

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Received: 20-01-2019; Revised: 22-02-2019; Accepted: 03-03-2019.

ABSTRACT

Leprosy is a chronic disease caused by a bacillus, *Mycobacterium leprae*. *Mycobacterium leprae* multiplies gradually and the incubation period of the disease, on average is five years. In some cases, symptoms may occur within one year but can also take as long as twenty years to occur. The disease primarily affects the peripheral nerves, skin, eyes and also the mucosa of the upper respiratory tract. Leprosy is curable with MDT and it is transmitted via droplets, from the mouth and nose during close and regular contacts with untreated cases. Untreated, leprosy can cause progressive and permanent damage to the limbs, skin, nerves, and eyes. There were 216108 fresh leprosy cases registered worldwide in 2016, as stated by official figures from 145 countries from the six WHO Regions. Based on 173 358 cases at the end of 2016, prevalence rate corresponds to 0.29/10,000. The Global Leprosy Strategy 2016–2020: "Accelerating towards a leprosy-free world" was released in April 2016. The introduction of MDT to leprosy programmes in the mid-1980s resulted in a significant reduction in the prevalence of the disease, from 5.4 million cases at that time to a few hundred thousand currently.

Keywords: Hansen's disease, incubation period, multi drug therapy, leprosy-free world.

INTRODUCTION

Dr. Gerhard Henrik Armauer Hansen of Norway was the first person to recognize the germ (*Mycobacterium leprae*)¹ that causes leprosy under a microscope and thus was not hereditary, from a curse, or from a sin. It mainly affects the skin and nerves. It develops gradually with an average gestation period of 3 years. Leprosy can affect all ages and both sexes. MDT (Multiple Drug Therapy) kills the bacteria and stops the extent of the disease. The disease generally affects the skin, the peripheral nerves, mucosa of the upper respiratory tract, and also the eyes. It is transferred via droplets, from the nose and mouth, during close and common contacts with untreated cases.

Diagnose Leprosy

Signs of Leprosy

A leprosy patient is someone who has a skin lesion²⁻³ or patches with a certain loss of sensation; and has not finished a full course of management with multidrug therapy.

Leprosy patches

Can be pale or reddish (or) copper-colored; Can be flat or raised, usually do not hurt, Do not itch, Lack sensation to heat, touch or pain, can appear anywhere.

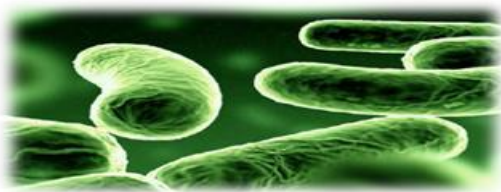


Figure 1a: Mycobacterium Leprae



Figure 1b: Leprosy



Figure 1c: Paucibacillary patches



Figure 1d: Multibacillary patches

Figure 1: Causative organism and leprosy patches.

Other signs of leprosy include:

Reddish or skin-colored nodules (or) smooth, shiny diffuse thickening of the skin without a loss of sensation.

Which signs are not leprosy?

Skin patches Present from birth (i.e. birth marks); where there is normal feeling, that itch; that are white, black or dark red, with scaling of skin, that appear or disappear abruptly and spread fast.

How to Examine a Patient for Leprosy

Examine the complete body skin in a daylight or in a well-lit room taking awareness to respect the patient's privacy. Ask the patient if the patch itches. If so, it cannot be leprosy. Test only one or two skin patches for sensory loss. If there is a definite loss of sensation, it is leprosy. Ask about treatment received in the past. A person who has finished a full course of MDT very rarely needs further treatment. Look for any visible disability of hands, eyes, face, and feet. When in doubt about the diagnosis, for all time send the patient to the nearby referral Centre.

Treatment**Classification of Leprosy⁴⁻⁵**

Leprosy is classified into Paucibacillary (or) Multibacillary leprosy based on the number of patches. 1–5 patches? It is Paucibacillary (PB) leprosy. Treatment: six PB blister packs. More than 5 patches? It is Multibacillary (MB) leprosy. Treatment: twelve MB blister packs.

Five Simple Steps to Start MDT

- Count up the number of skin patches in order to classify the type of leprosy into PB (one to five patches) or MB (more than five patches). If in doubt, classify as MB.
- Inform the patient and anyone accompanying the patient about the disease and its treatment encourage them to ask questions and clear up any doubts.
- Give the patient the first dose at the health Centre. Show them which drugs from the MDT blister pack should be taken once a month and which every day.
- Give the patient enough blister packs to last until their next visit. Arrange the time and place of the visit. If it is difficult for them to come to the health Centre, give them the full course of treatment.
- Write out the patient card.

Information for the patient regarding leprosy: They will be cured of leprosy if they take the drugs in the blister packs as advised. They must complete a full course of treatment: six blisters for PB patients and 12 blisters for MB patients. The drugs prevent the disease from spreading. Patients can lead normal lives. They can live at home, go to school, work, and play, get married, have children, participate in social events.

Figure 2: Multiple Drug Therapy (MDT) of leprosy.

Their treatment

The MDT blister packs are complimentary. They should keep the blister packs in a safe, dry, and shady place and out of the reach of children. If the agents are spoiled (changed color, broken), the health worker will replace them.

Possible problems

The medicines will turn their skin darker and urine red. Patients should not worry: both will return to normal once the treatment is completed. They must go immediately to a health centre if they have any problems (muscle weakness, pain, fever, malaise, new lesions).



They should return for a check-up after they whole their treatment. If they previously have disabilities, tell them how to prevent themselves from injuries.

Accompanied MDT has been designed to address a frequent problem in field programs. Patients often have to interrupt their treatment because of a shortage of drugs at the health center, poor access to the health services or simply because no one is at the health centre when they come to collect their treatment. Gives patients a choice: they can collect their treatment at regular intervals from the health centre or take the entire course with them when diagnosed. Patients should choose someone close to them to go along with them with their treatment.

Key Tasks at the Health Centre to provide MDT Services

- Make leprosy diagnosis and treatment available, free of charge, on every working day.
- Keep adequate stocks of all four types of MDT blister packs (child and adult MB/PB).
- Keep a simple register to record the drugs received and distributed, and the remaining balance.
- Maintain a simple recording and reporting system to keep track of patients under your care.
- Display posters on leprosy at the health Centre and in public places

Important Points about Multiple Drug Therapy (MDT)

Safety

MDT is very safe and effective in curing leprosy. MDT is safe during pregnancy. MDT is safe for patients being treated for tuberculosis (TB) as well as those who are HIV-positive. Rifampicin is common to the treatment of leprosy and TB and must be given in the doses required for TB.

Treatment

Give MDT free of charge to all leprosy patients. Help ensure that patients complete their treatment. Give patients enough blister packs to last until their next visit. Use Accompanied MDT for all patients who find it difficult to visit the health Centre regularly. If a person cured of leprosy presents novel skin patches with definite loss of sensation, consider this as a case of relapse. Re-treat with appropriate MDT regimen.

MDT Supplies

Do not use MDT blister packs – beyond the expiry date – if the drugs are damaged, or have changed color, or if a capsule is broken. Keep MDT blister packs in a cupboard or a wooden box. If MDT blister packs for children are not available, take out tablets from an adult pack for the proper dose.

Management of Complications

Leprosy Reactions

Patients can change of getting reactions, which are part of the natural course of the disease. Reactions are not a side effect of MDT. They are the body's response to leprosy and do not mean that the disease is getting worse or that the treatment is not working.

Signs of reactions include: Existing skin lesions develop reddish and swollen; Painful reddish nodules appear; Peripheral nerves develop painful, tender and swollen; Signs of nerve damage such as loss of sensation and muscle weakness; Fever and malaise; Hands and feet may be swollen.

Managing Reactions⁶⁻⁷:

Patients must go immediately to a health Centre for treatment suppose any patient has get these symptoms. Reactions require urgent treatment with superior medicines as they can lead to irreversible deformities. Give aspirin or Paracetamol to decrease pain and fever. Advise the patients to rest as that is necessary.

Common Side Effects of MDT

Red colored urine is due to the color of rifampicin, which is taken once every month. This takes for only a few hours after having the drug.

Darkening of skin is due to Clofazimine utilized daily for treating MB patients. This is harmless and will disappear within a few months after completing the treatment. Usually patients should be taken medicines regularly.

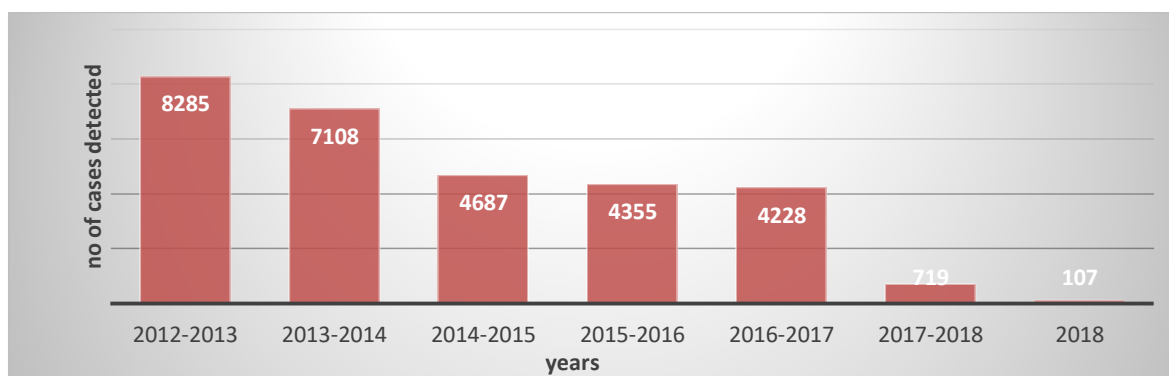
Allergy

As with any medicine, some patients may be allergic to one of the drugs in MDT. Most commonly there will be severe itching and red or dark spots on the skin. In such cases, ask the patient to prevent taking the medicines and refer him or her to the nearest hospital.

From 2012 to 2018 the leprosy data has been given

Years	Cases detected
2012-2013	8285
2013-2014	7108
2014-2015	4687
2015-2016	4355
2016-2017	4228
2017-2018	719
2018 (may)	107



STATS OF LEPROSY IN AP (Andhra Pradesh)**Figure 3:** Leprosy statistical data of Andhra Pradesh from 2012-2018**CONCLUSION**

The paramount way to inhibit the extent of leprosy is to give all the patients with MDT. The best way to avoid disabilities is early diagnosis and rapid treatment with MDT. The past three years have seen remarkable achievements and growth in leprosy control due to the widespread and free availability of chemotherapy in the form of multidrug therapy which gives a simple and highly efficient cure for all types of leprosy. Display posters about leprosy in public places. Enlist the support of others (e.g. community leaders, teachers, religious authorities and medical practitioner) to give a positive messages about leprosy. Untreated, leprosy can cause progressive and permanent damage to the limbs, nerves, skin and eyes. The global leprosy strategy 2016 -2020 was strengthen governor ownership coordination and partnership stop leprosy and its complications, discrimination and promote inclusion. If we follow the strategies leprosy free world can be attained or accomplished.

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Source of Support: Nil, Conflict of Interest: None.

