

Leprosy – An Old Threat: Frequently Missed

Md. Shafiqul Bari

Associate professor (Medicine)

Sylhet MAG Osmani Medical College

Scenario

- A 30-year-old rickshaw puller presented with gradually developing tingling and numbness of hands and feet



Thickened ulnar nerve

History

- The term Leprosy is derived from the Greek word “Lepros” which means “Scaly”.
- The name “Kustha” was derived from “Kushnati” which means “eating away” in Sanskrit.
- Sufferers were regarded as dead, and segregated from the society.

- 1873 - Dr. Armuer Hansen discovered that a microorganism (*Mycobacterium leprae*) is responsible for the disease
- 1991 - World Health Assembly targeted Elimination Leprosy as a public health problem.

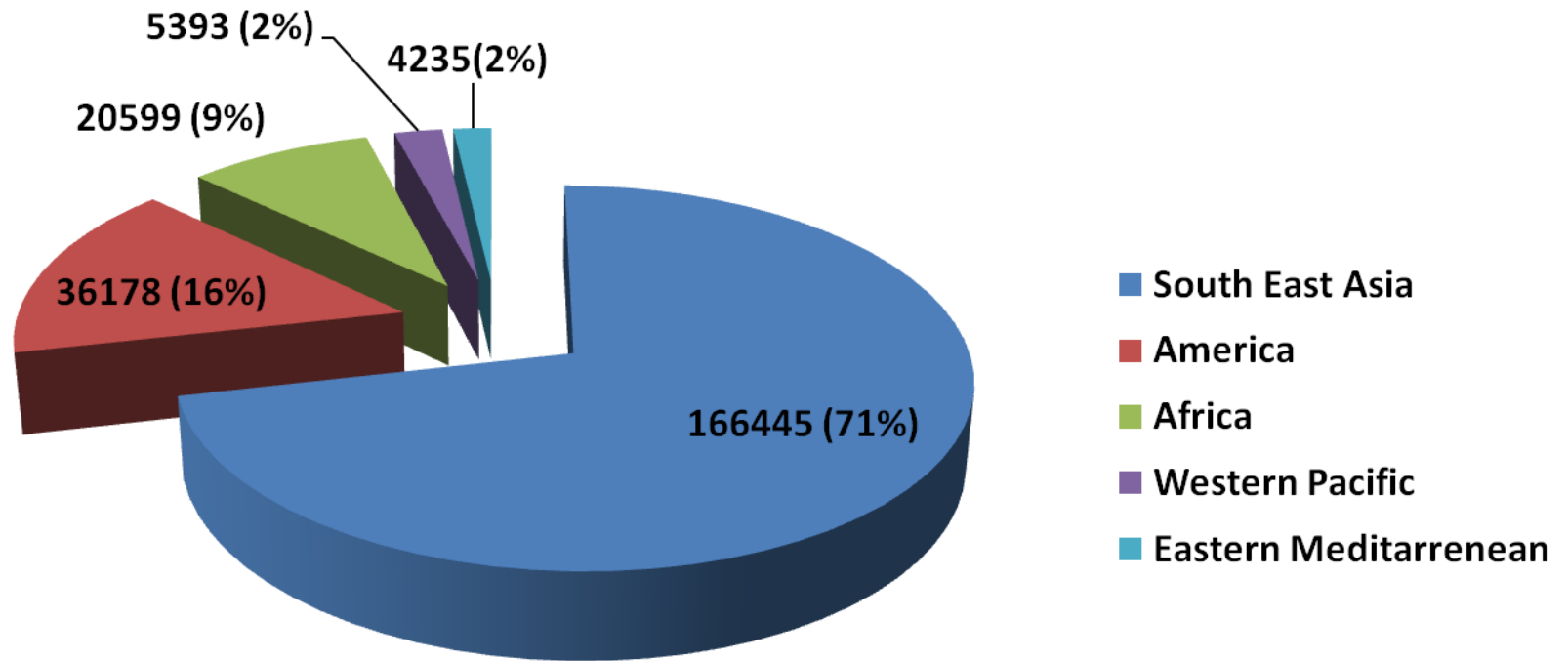
History of treatment

- 1940s - Dapsone replaced Chaulmoogra oil.
- 1981 - WHO introduced MDT for all cases of Leprosy

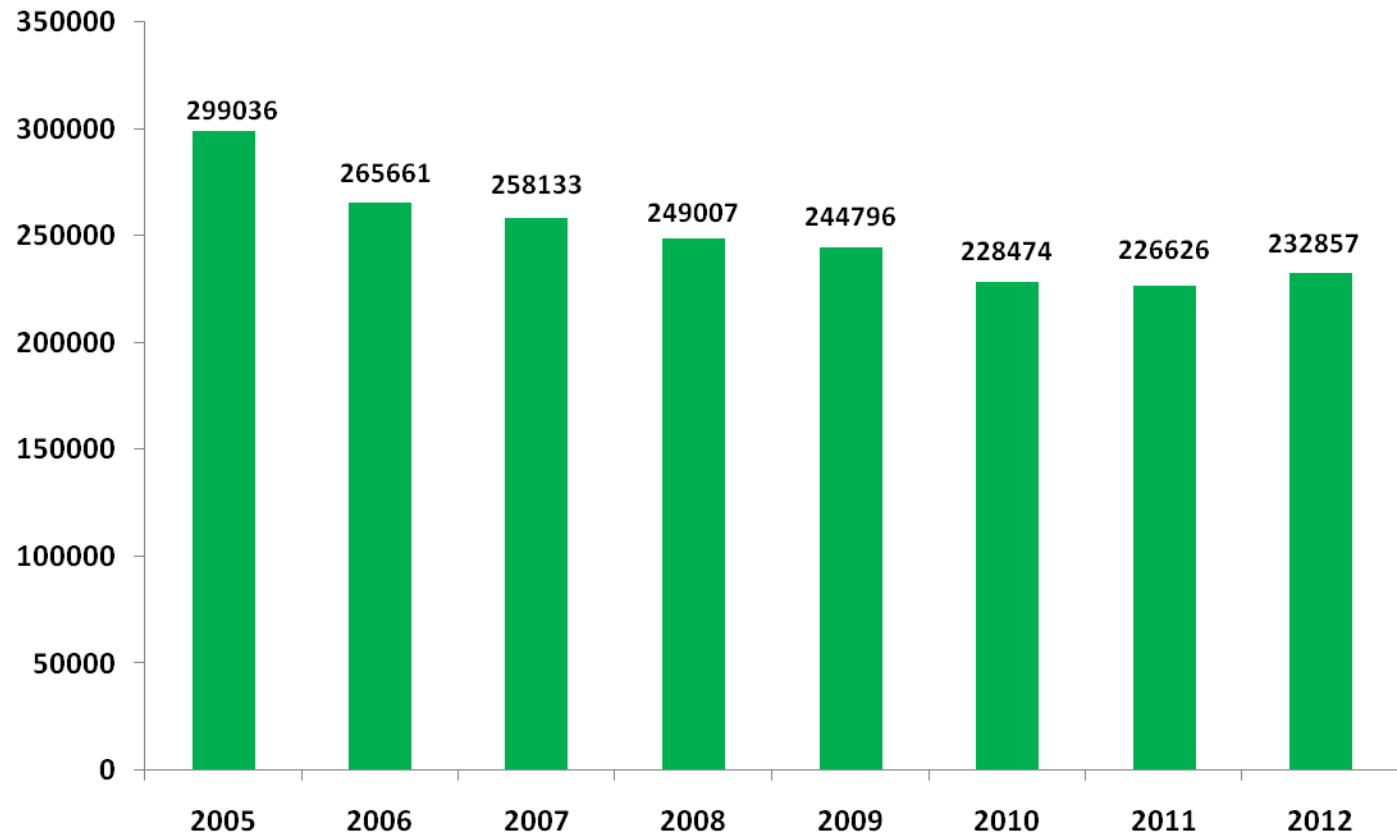
Registered prevalence of leprosy reported by WHO, 2012

- Total – 189 018 (0.33)
- SEAR – 125 167 (0.68)

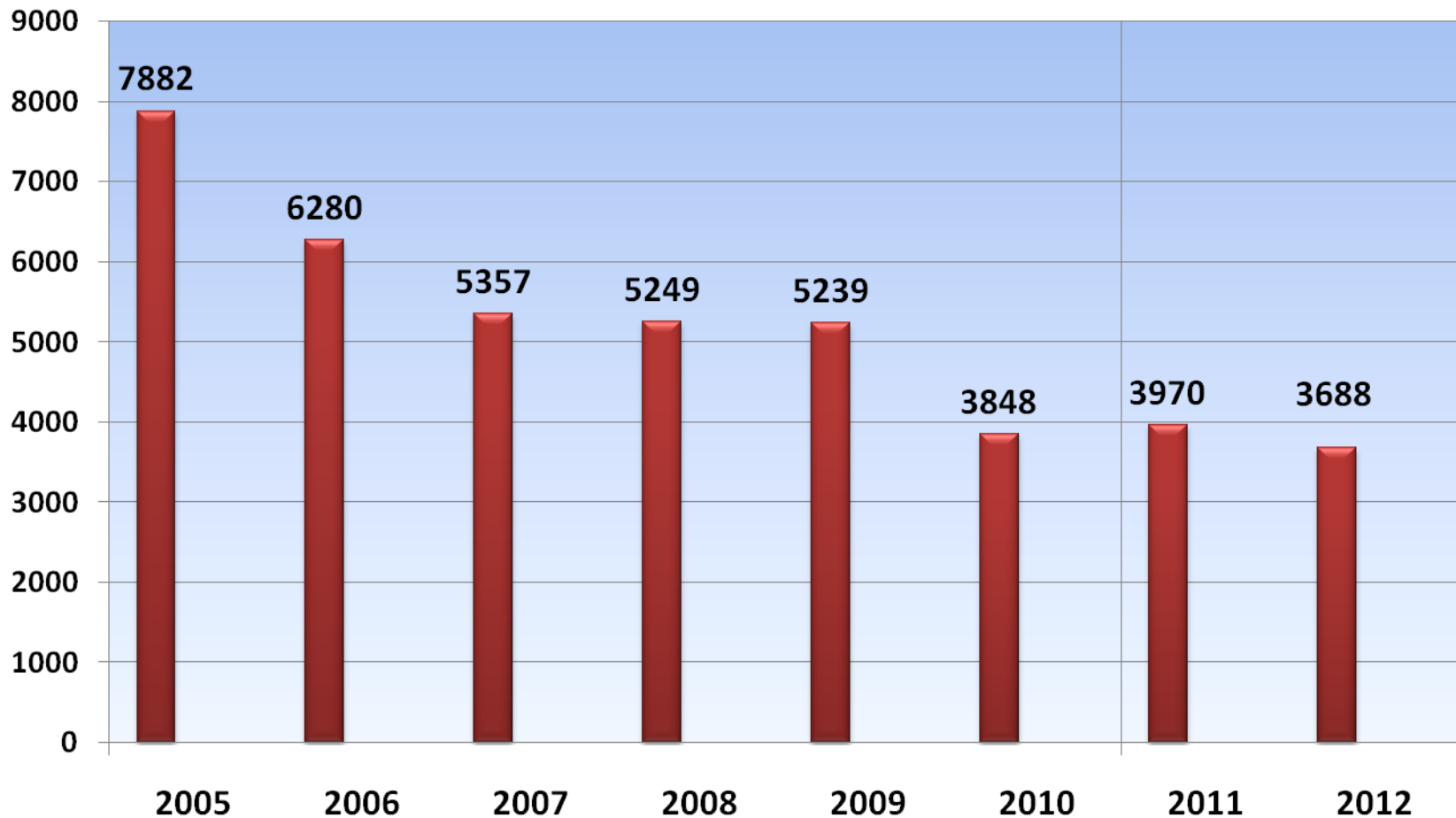
Distribution of new cases reported in 115 countries, by WHO regions, 2012



Global trends in the detection of new cases of leprosy, 2005–2012



Trends in the detection of leprosy (2005 – 2012) in Bangladesh



Leprosy prevalence in Bangladesh

- 1991 – 13.6/10 000 population
 - 2012 – 0.29/10,000 population
- ❖ Below one per 10,000 means the disease has been eliminated and no longer represents a major public health concern

Milestones of achievement in Bangladesh

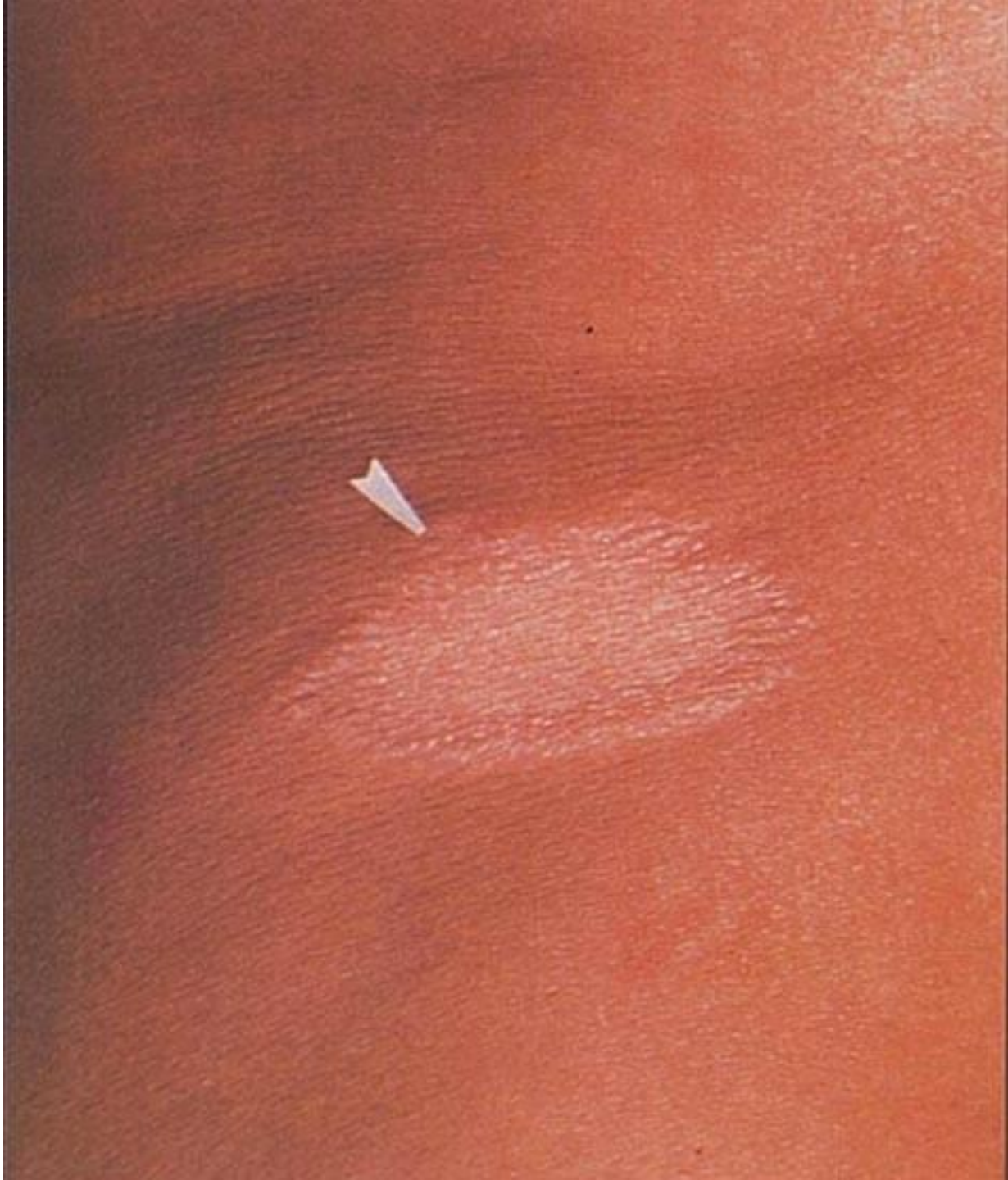
- 1985 - Introduction of MDT in 120 high endemic upazilas
- 1993 - Intensification of leprosy elimination activities through integration of the leprosy control services into the general health services
- 1998 - Achievement of elimination goal at national level.

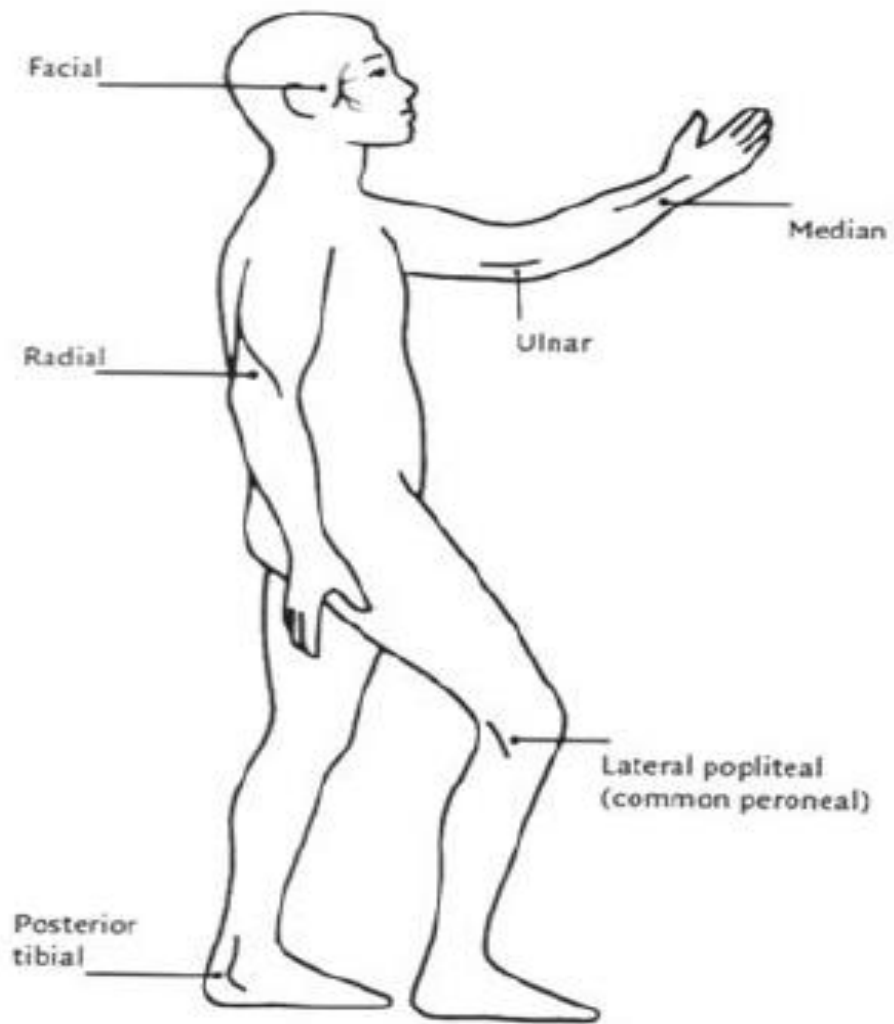
Endemic zones

- Nilphamari
- Panchagarh
- Gaibandha
- Bandarban
- Khagrachari

Clinical aspects

- Cardinal Signs of Leprosy
 - ❖ Definite loss of sensation in a pale or reddish skin
 - ❖ A thickened or enlarged peripheral nerve, with loss of sensation and/or weakness of the muscles supplied by that nerve
 - ❖ The presence of AFB in a slit skin smear





Sites of nerve involvement







Differential diagnosis of skin lesion

- Some signs, frequent in skin diseases, are unusual in Leprosy,
 - ❖ if the lesions are itching
 - ❖ if they are scaling
 - ❖ if they are hyper-pigmented
 - ❖ if they are inflamed

Look for other skin disease

- Flat lesion:
 - ❖ Birth mark
 - ❖ Vitiligo and leucoderma
 - ❖ Nutritional dyschromia
 - ❖ Ringworm
 - ❖ Pityriasis versicolor

- Raised lesions: papules, plaques
 - ❖ Psoriasis
- Raised lesions: nodules or swellings
 - ❖ PKDL
 - ❖ Lupus Vulgaris
 - ❖ Neurofibromatosis

**NEGATIVE SKIN SMEAR FOR AFB = IMPOSSIBLE IN
REAL LEPROSY NODULE**



Differential diagnosis of foot ulcer

- Diabetic foot-ulcers
- Buerger's disease
- Meningomyelocele or spina bifida

Differential diagnosis of deformity

- In any cases presenting with acquired deformities we should keep leprosy in differential diagnosis
- We should look for nerve thickening, definite sensory loss and cutaneous lesion
- Differential diagnosis will need to be carried out with other conditions like trauma, other type of palsy etc.

- Definite confirmation of leprosy may need Nerve Conduction Study, skin or nerve biopsy and PCR technique to detect leprosy infection in certain difficult to diagnose cases.

Reactions in leprosy

- Reversal Reaction (or Type 1) and ENL (or Type 2)
- Both the types of reactions can occur before the start of treatment, during treatment, or after the treatment has been completed.
- Both types can be divided into mild or severe.

- Leprosy reactions are usually diagnosed by clinical examination only
- Some cases develop signs of nerve damage (neuritis) without the obvious changes in skin lesions.

Type I (Reversal reaction)	Type II (ENL)
Type IV hypersensitivity reaction	Type III hypersensitivity reaction
Borderline group i.e. in unstable types like BT.BB.BL.	Seen in MB cases only (BL & LL type)
Existing skin lesions suddenly become inflamed	Red, painful, tender, sub cutaneous nodules .
Nerves close to skin may be enlarged, tender and painful (neuritis) with loss of nerve function (loss of sensation and muscle weakness) and may appear suddenly or rapidly.	Nerves may be affected but not as common or severe as in Type 1
Other organs - Not affected	Other organs like eyes, testis, and kidneys may be affected
General symptoms - Not common	Fever, joints pain, red eyes with watering

Key message

- Although the majority of leprosy patients have straightforward skin lesions which are easy to see, experienced workers know that there is a great variety in the skin lesions of leprosy.
- Some skin lesions are very diffuse and difficult to distinguish from normal skin: in these cases the other symptoms and signs become important.

When should leprosy be suspected?

- Typical or atypical skin lesion
- Loss, or decrease, of feeling in the skin lesion
- Numbness or tingling of the hands or feet
- Weakness of the hands, feet or eyelids
- Painful or tender nerves or thickened nerve
- Swellings or lumps in the face or earlobes
- Painless wounds or burns on the hands or feet
- Acquired deformity of hands and feet



BAN 275/7 (50) VS ENG 260/10 (48.3)