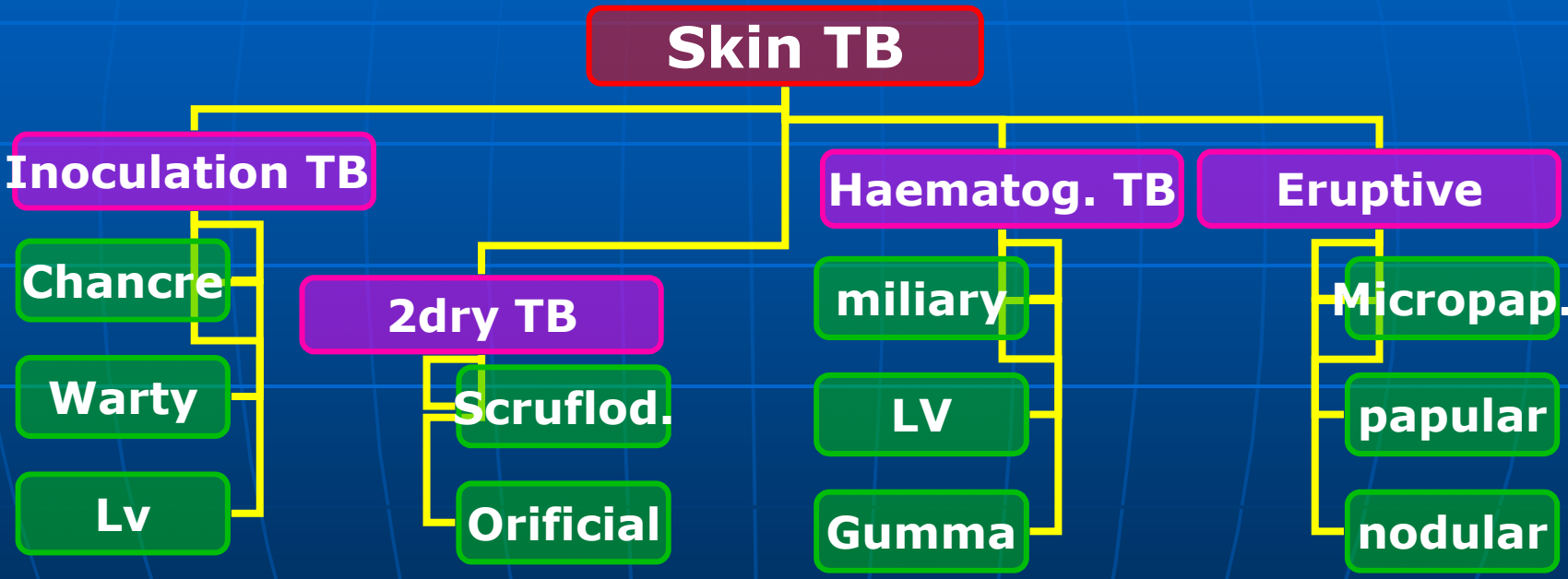
بسم الله الرحمن الرحيم

Mycobacterial Infections

Tuberculosis of the skin

Classification



Lupus vulgaris

- The most common
- Either by inoculation or haematogenous spread
- In patients with high or moderate immunity
- Pathologically: localized granulomatous reactions

Clinical picture:

- On the exposed parts specially face
- A plaque composed of soft reddish brown nodules
- Active and healed edge
- Heal with unhealthy scar
- +ve diascopy test


(c) University Erlangen,
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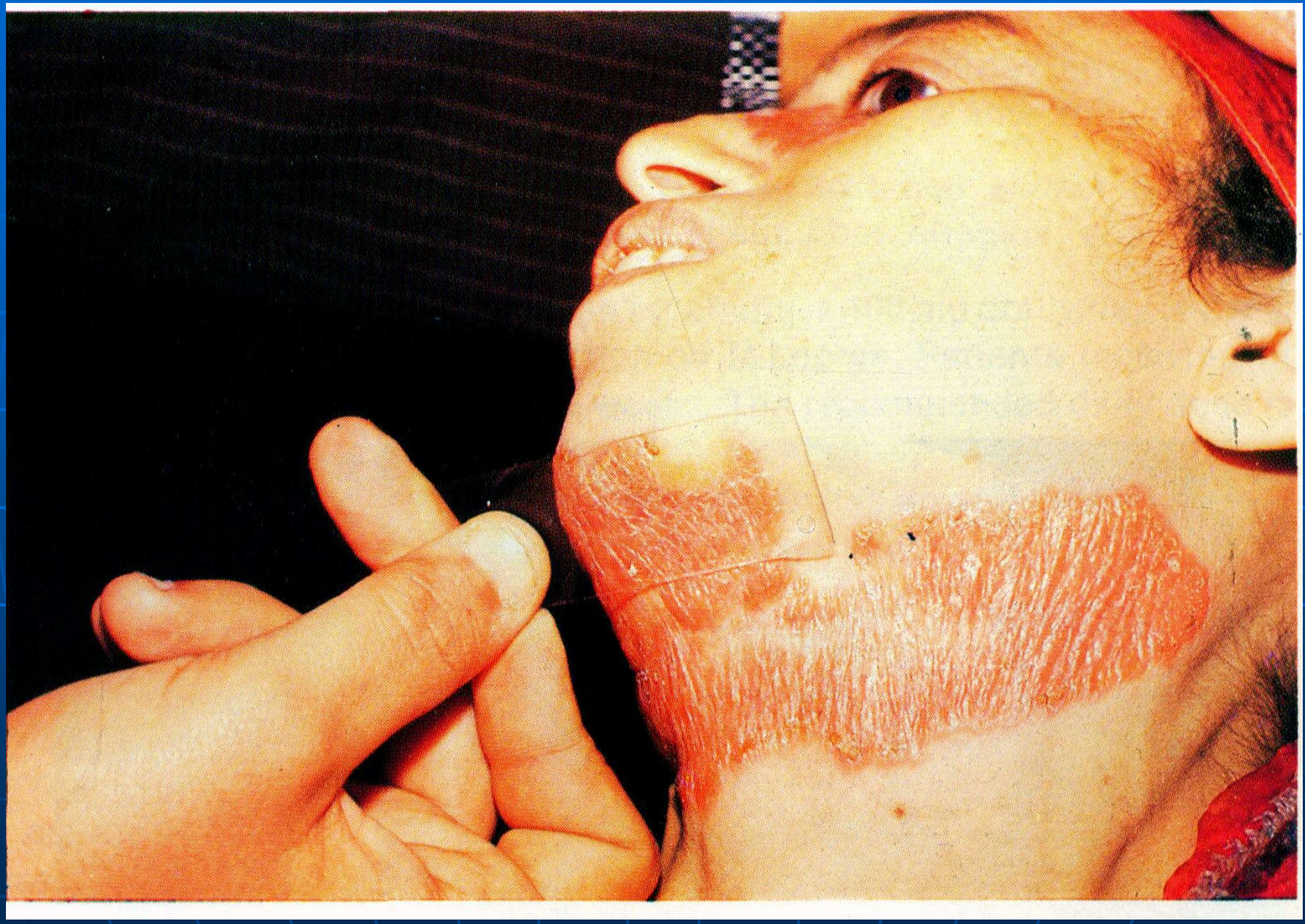

complications

- Ulceration, destruction and mutilation
- malignancy

Lupus vulgaris (Plaque on the cheek – Commonest site)


L.V.
atrophy & scar


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ASSEM FARAG

Tuberculous Chancre

- Direct infection to non immune skin
- Usually in children
- Skin lesion- lymphangitis- regional Lymphadenopathy
- Affect extremities, brown red papule, nodule or large ulcer
- Tuberculin test -ve ⟶ +ve

Tuberculosis verrucosa cutis

- Direct inoculation in skin with moderate or high immunity
- On the dorsa of the distal extremities
- Single dull red hyperkeratotic plaque

Scrufloderma

- Spread from an underlying focus; LN, Joint or bone
- Deep purplish induration of he skin
- Breakdown with caseous discharge
- Sinuses, fistulae, ulcerations, granulations, crusts and hypertrophic scars.


SSEM FARAG

- **Tuberculosis cutis orificialis:** around orifices in patients with vesciral TB
- **Acute miliary TB:**

  in non immune patients with multiple skinlesions
- **Tuberculides:**

  heamatogenous dissimination of bacilli in patients with high immunity.

Treatment

1. **Isoniazid:** 300 mg/day/6 months
2. **Rifampicin:** 600 mg/day/6 months
3. **Pyrazinamide:** 2-2.5 g/day/1st 2months
4. **Ethambutol:**15mg/kg/day/1st 2months

LEPROSY

Leprosy

* Definition:

  Leprosy is a chronic, systemic infectious disease affecting primarily the peripheral nerves and secondarily the skin, mucous membranes, the eye, the bones, and viscera

* Etiology: *Mycobacterium leprae*

* Epidemiology:

  - Common in tropical and subtropical areas
  - Infection is usually contracted during childhood
  - Both sexes are affected, but lepromatous leprosy (LL) is more common in males

* Incubation period: 2 – 5 years in tuberculoid leprosy (TL) & 8 – 10 years in LL

Leprosy

* Mode of infection:

- Prolonged close contact with an open case
- By droplet infection (nasal discharge)
- Susceptible individual
- Long incubation period

Classification of Leprosy

1. According to clinical, bacteriological, histopathological and immunological features:
   - Tuberculoid leprosy (TL)
   - Border-line tuberculoid (BT)
   - Border-line border-line (BB)
   - Border-line lepromatous (BL)
   - Lepromatous leprosy (LL)
   - Indeterminate leprosy

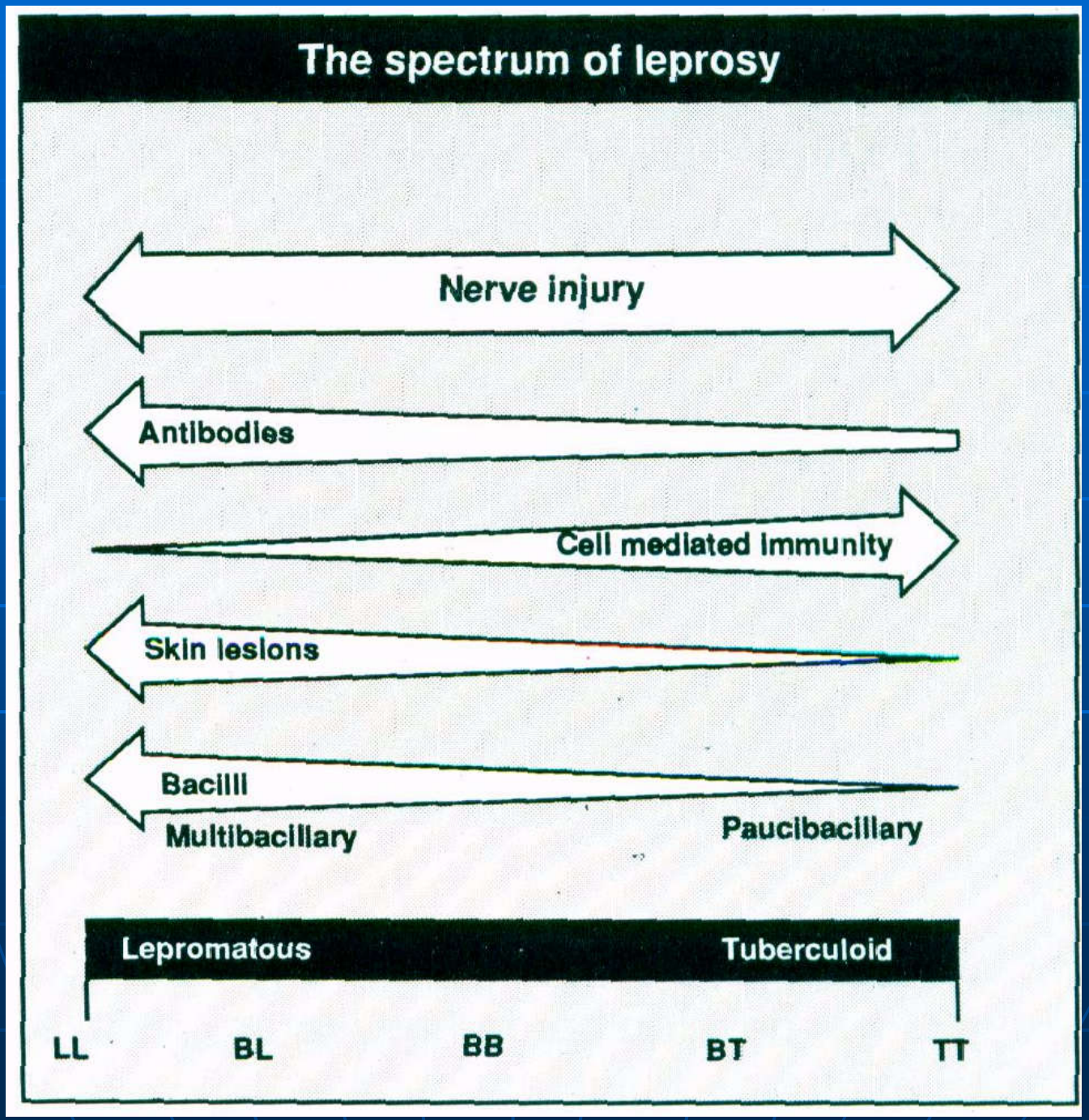
Classification of Leprosy

2. According to results of slit-skin smears:

- Paucibacillary leprosy: scanty or absent bacilli (TL & BT)
- Multi-bacillary: numerous bacilli (BB, BL & LL)

Diagnosis of Leprosy

- Clinical
- Slit-skin smears
- Skin biopsy
- Nerve biopsy
- Lepromin test


The spectrum of leprosy
Nerve injury
Antibodies
Cell mediated immunity
Skin lesions
Bacilli
Multibacillary
Paucibacillary
Lepromatous
Tuberculoid
LL
BL
BB
BT
TT

Reactions in Leprosy

1. Type 1 reaction:

- Occurs in border-line leprosy
- Due to rapid change in immunity
- Nerves are swollen and tender
- Serious neurological complication may occur
- Skin lesions become erythematous, edematous and may ulcerate

2. Type 2 reaction (erythema nodosum leprosum):

- Occurs in BL & LL
- It is an immune-complex disease
- Characterized by painful, red nodules on the face and extremities
- Fever, malaise, myositis, artheritis & orchitis
- Nerve affection is less than in type 1 reactions

Treatment of Leprosy

* Paucibacillary leprosy: (TL & BT)

1. Rifampicin: 600 mg monthly supervised
2. Dapsone: 100 mg daily self-administered

- Duration of treatment: at least 6 months
- Duration of follow-up: at least 2 years

* Multi-bacillary: (BB, BL & LL)

1. Rifampicin: 600 mg monthly supervised
2. Dapsone: 100 mg daily self-administered
3. Clofazimine (Lamprene): 300 mg monthly supervised & 50 mg daily self-administered

- Duration of treatment: at least 2 years
- Duration of follow-up: at least 5 years

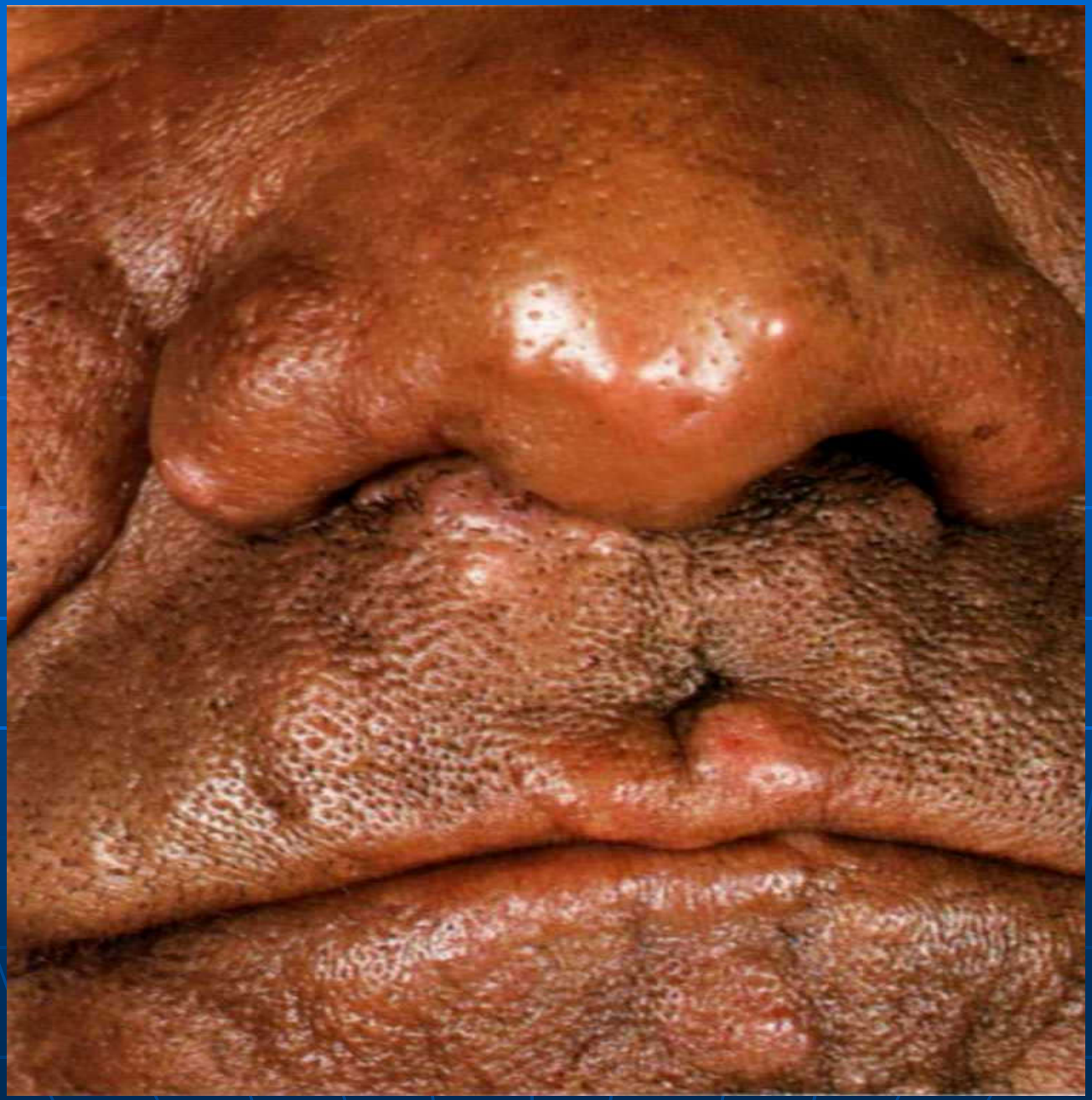
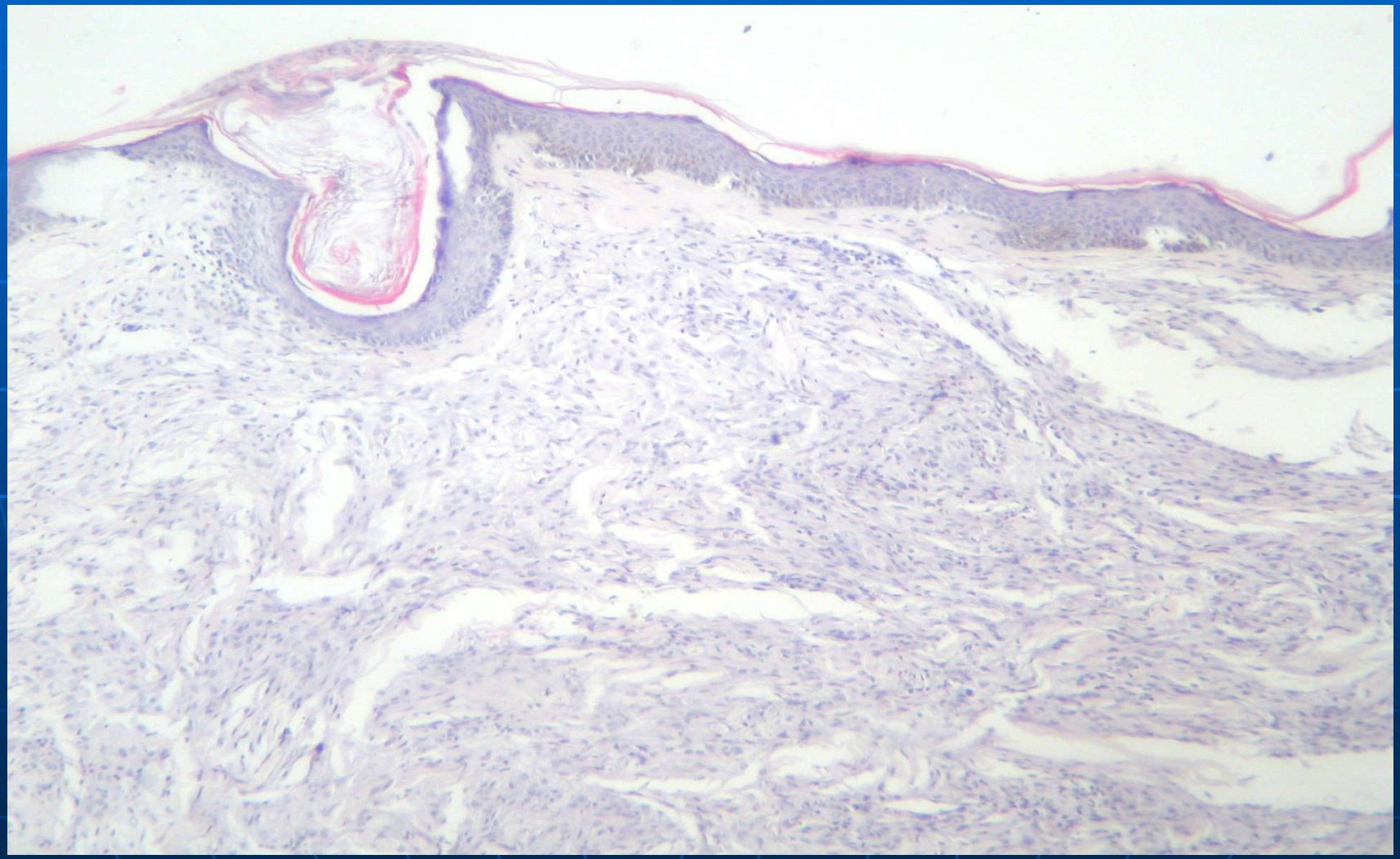
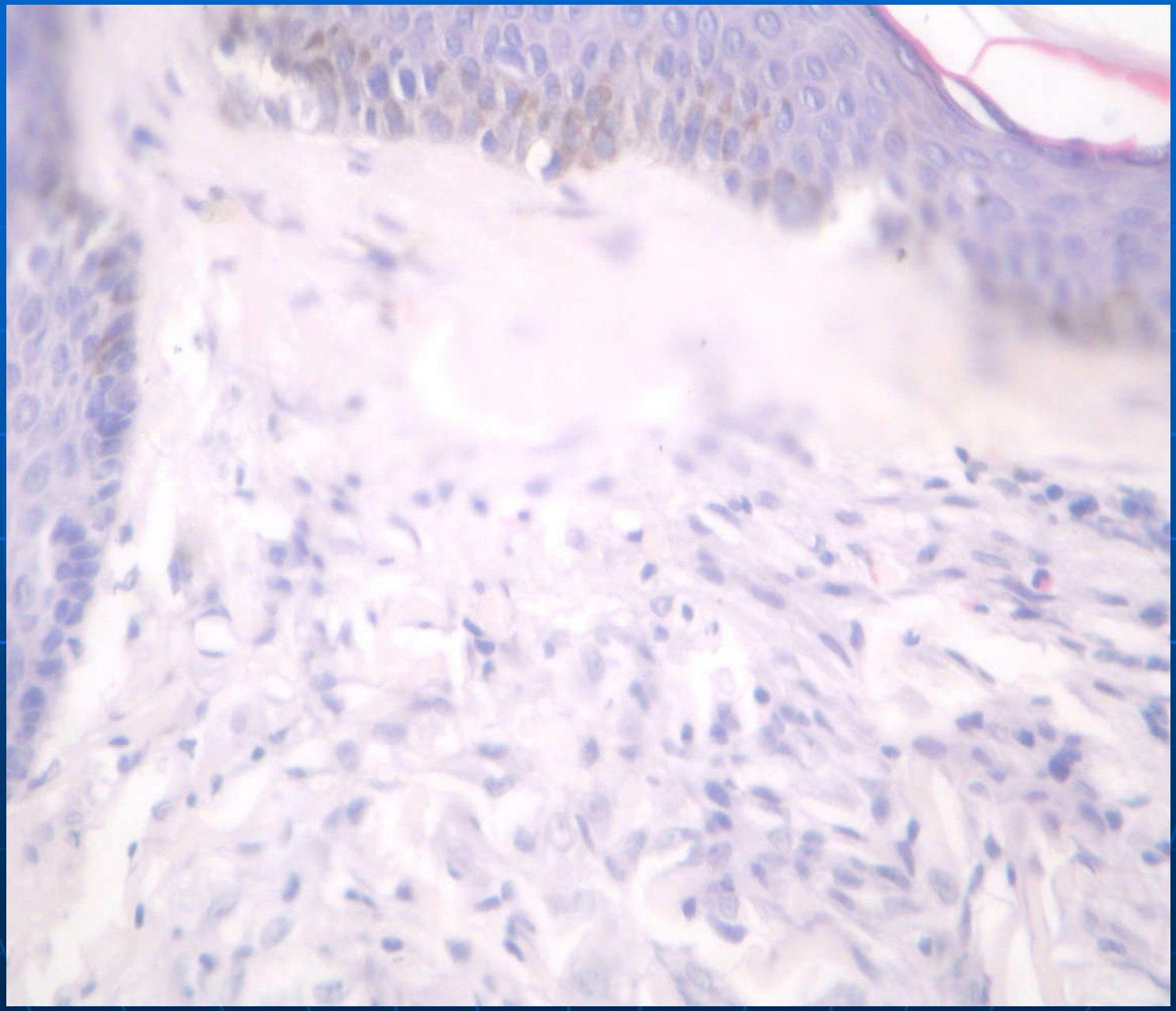


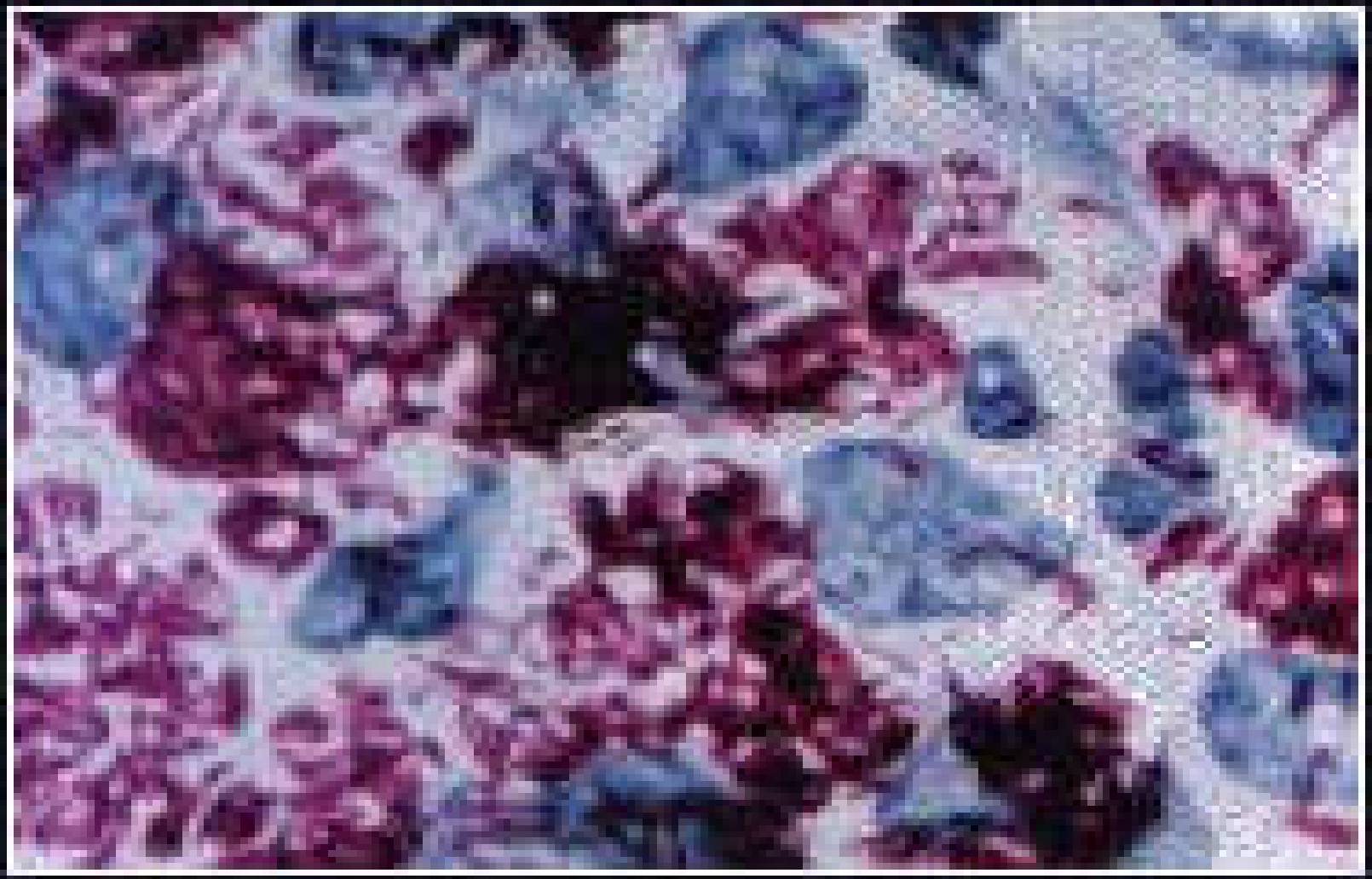
Fig. 46 : Leprosy - Acquired Ichthyosis

The leg shows ichthyotic changes. The foot is deformed due to paralysis of its small muscles.

Histopathology of lepromatous leprosy







Mycobacterium leprae
Courtesy Sanger Center

Thank You