CUTANEOUS TUBERCULOSIS

ETIOLOGY- Mycobacterium Tuberculosis

PATHOGENESIS- manifestations of lesions depend on

1.Immunity of the host

- Specific immunity to M. Tuberculosis – depending on whether exposure to the bacteria is primary or secondary
- General immunity of the host

2. Route of entry

3. Bacterial load

- CLASSIFICATION

1.Exogeneous source

Tuberculous chancre
Warty tuberculosis/ TVC
Lupus vulgaris

2.Endogenous source

a. contiguous source – Scrofuloderma
b. auto-inoculation – Oroficial T.B.
c. hematogenous - Lupus vulgaris,
Tuberculous gumma

3.Tuberculides –

a. Micropapular – Lichen scrofulosorum
b. Papular, Papulo-necrotic
c. Nodular– Erythema nodosum
Erythema induratum(Bazin)

Tuberculous Chancre

- No prior immunity to M. tuberculosis

(Primary complex in the skin)

- Entry–cuts, abrasion, insect bites, wounds
- Site- exposed areas of limbs, face
- Age - children

- Clinical feature
  Nodule → ulcerates producing tuberculous chancre
- Crusts form and edges become indurated
- Regional lymphadenopathy in few weeks
- Dev. Of immunity → lesion heal to produce a scar

Warty Tuberculosis/ Tuberculosis Verrucosa Cutis

- Exogenous source
- Moderate to high immunity to M. tuberculosis
- Occupational- who handle tuberculous tissue eg. butcher, pathologist, veterinarians (anatomist wart)
- Site – hands, feet

- Single indolent verrucous nodule or plaque with a serpenginous border, indurated base, centre may show scarring.

- Heals in several months leaving thin atrophic scar
- Lymphadenopathy rare

Scrofuloderma/ Tuberculosis Cutis Colliquativa

- Develops as an extension of an underlying focus – lymph node or bone
- Site – cervical region common with infected cervical lymph nodes breaking down into the skin

- Infected lymph nodes become inflamed, swollen, get fixed to overlying bluish skin

- Breakdown of lymph nodes → formation of ulcers with undermined edge
- AFB can be demonstrated

Orificial Tuberculosis/ Tuberculosis Cutis Orificialis

- Develops from auto inoculation around the muco cutaneous junctions in patients with internal tuberculosis
- Site- lips, mouth in pulmonary T.B.
  anal region in intestinal T.B
  external genitalia in genitourinary T.B
- Host immunity poor with active internal disease.

- Small erythematous nodules break down, form round, shallow, granulating ulcers covered by thin crust.
- Painful
- No tendency to heal without effective treatment
- Tuberculin test may be -ve

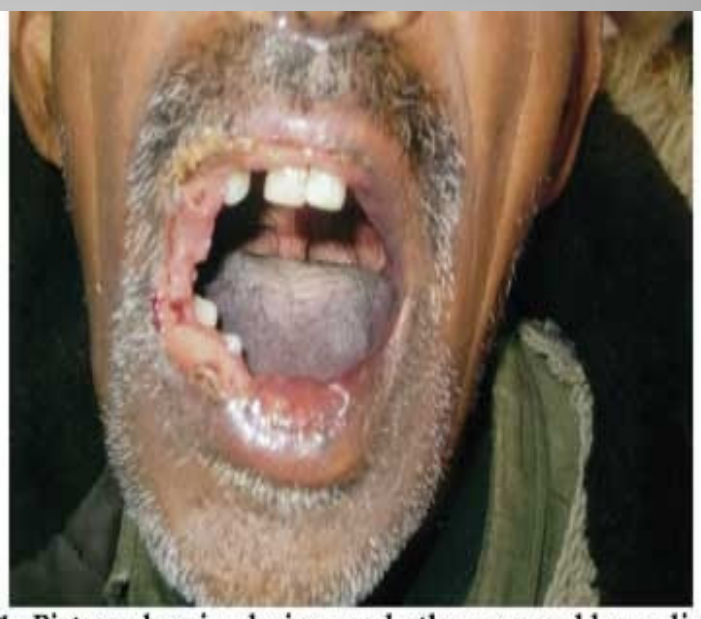


Fig. 1 : Picture showing lesions on both upper and lower lips on right side.

Lupus Vulgaris

- most common form of cut. TB
- Usually acquired from an external source; rarely from haematogenous dissemination

- Site – around nose (nasal mucosa and lips) and face in western countries
  buttocks, thighs, legs in India

- Initial lesion is a soft erythematous nodule
- Slowly several such nodules coaslesce to form a soft plaque which slowly extends
- Presence of APPLE JELLY nodules at edge of plaques- in diascopy(uncommon in Indian skin)
- MATCH STICK sign – soft nodules can be probed or pierced with a match skick

- Diseases relentlessly progresses with irregular extension of the plaque
- Healing occurs with SCARRING
- Occasional ulceration, crusting and scarring with destruction of underlying tissues and cartilage- ULCERATIVE and MUTILATING form

Tuberculous Gumma

- Results hematogenous dissemination from a tubercular focus
- Usual in malnourished children
- The lesion is initially a subcutaneous nodule which breaks into the skin to form an ulcer with an undermined edges.

TUBERCULIDES

- Symmetrical eruptions
- Result of internal focus of tuberculosis, though internal disease may not be active. Patient health is good.
- Prob. Cause hematogenous dissemination of bacilli in a person with high degree of immunity
- Tuberculin test always +ve
- Cured by ATT

Lichen Scrofulosorum

- Tiny<5mm, perifollicular, lichenoid papules
- Asymptomatic
- Site – trunk
- Involute after many months without scars
- Tuberculin test – strongly +ve

- Papulonecrotic Tuberculides
- Crops of deep seated papules and nodules
- Lesions are capped by pustules; ulcerate forming crusts

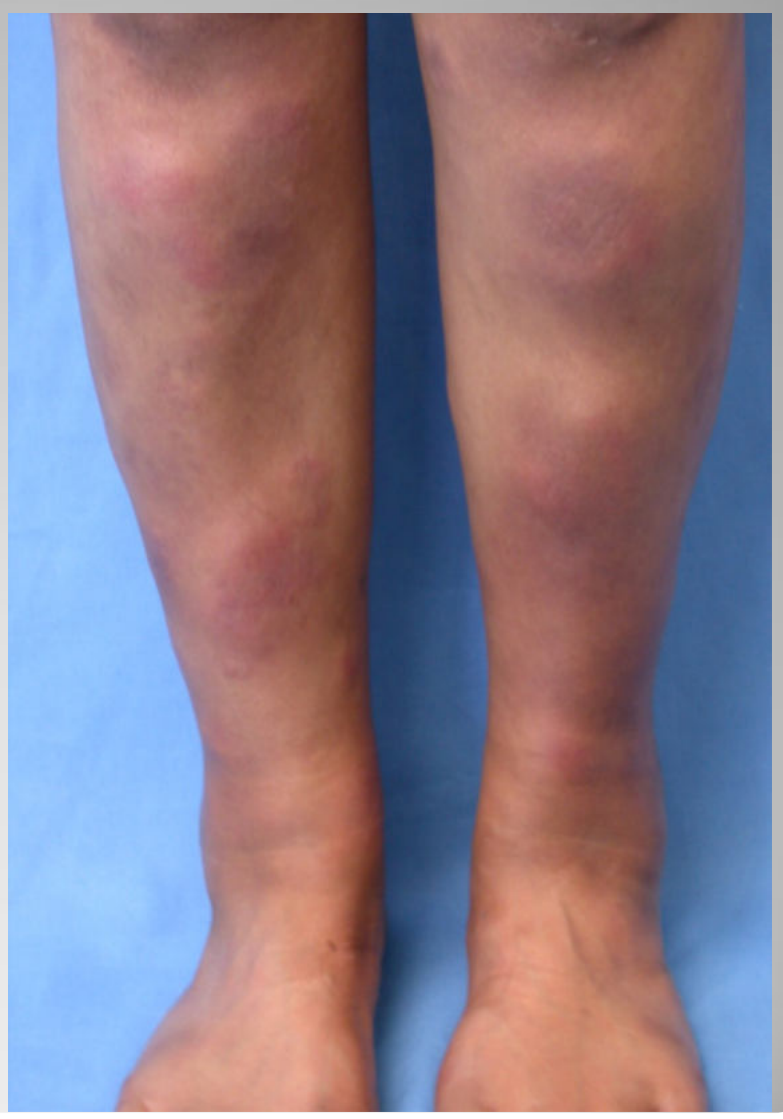
- Heal in a few months with scar
- New crops keep developing

- Asymptomatic
- Tuberculin test strongly +ve

Erythema Nodosum

- Crops of indurated very tender, erythematous deep seated nodules, which evolve from red to violaceous to yellow
- Inspection – bruise, palpation nodule
- Never ulcerates; heal without scarring
- Site – bilateral shins
- Constitutional- fever, malaise

- Tuberculin test +ve
- Course- spontaneous resolution in 6 weeks
- Histology – septal panniculitis no vasculitis



Erythema Induratum

- Site- calves in young adult females
- Bilaterally symmetrical
- Initial develop in cold weather
- Subcutaneous nodules and plaques with gradually involve the overlying skin with ulceration

- Tuberculin test +ve
- Ulcers heal leaving atrophic scars
- Chronic , recurrrent
- Histological – nodular vasculitis

Investigations

To confirm tuberculosis

- A. Biopsy – caseating granuloma
- B. Isolation of M.tuberculosis –
  1.culture of AFB from pus, skin biopsy specimen
  2. PCR
- C. Mantoux test

To rule out concomittant tuberculosis in other organs

- 1. CXR
- 2. X-ray joint, bones
- 3. FNAC – of enlarged lymph nodes

Differential diagnosis

lupus vulgaris- leishmaniasis, sarcoidosis, systemic fungal infection, SCC

tuberculosis verrucosa cutis - warts

TREATMENT

Standard ATT

- Intensive phase – isoniazid 5mg/kg
  For 2 months rifampicin 10mg/ kg
  ethambutol 15mg/ kg
  pyrazinamide 20mg/kg
- Continuous phase - isoniazid 5mg/kg
  For 4 months rifampicin 10mg/ kg

- Extension – max. 8 months

THANK YOU