Case 17

A 18-year-old Thai female from Bangkok

Chief complaint:

Crops of erythematous papules on both elbows and knees for 2 months

Present history:

The patient presented with 2-month history of multiple crops of mild itchy erythematous papules on both elbows, knees, and ankles. They evolved to crusted lesions and subsequently atrophic scars. She had also painless mass on left cervical area for 3 months but no consistent systemic symptoms.

Past history: no underlying disease
no history of contact TB

Family history: Nil

Drug : No drug allergy

Physical examination:

VS : T 37 ^{0}C, RR 20/min, BP 120/60 mmHg, HR 70/min
GA : good consciousness, not pale, no jaundice
CVS : normal S1 S2, no murmur
RS : normal breath sounds
Abdomen : no hepatosplenomegaly
LN : 4 left cervical lymph nodes enlargement, not tender, size 2-3 cms, firm in consistency

Skin examination:

Symmetric, disseminated crops of dusky red papules with central necrosis and dry hemorrhagic crust on extensor aspects of elbows, knees, and ankles. Spontaneous healing with atrophic scar. (Fig. 17.1- 17.4)

Few lesions developed on face and fingers.

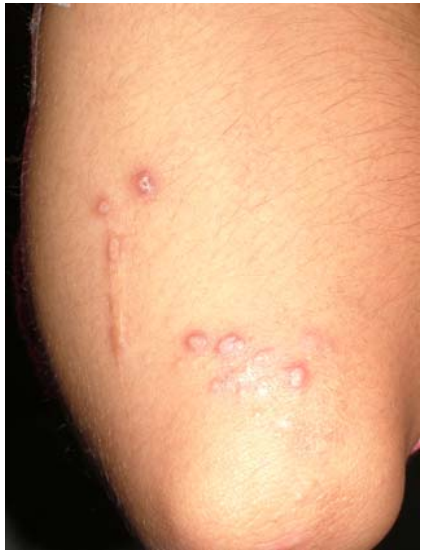

Fig. 17.1

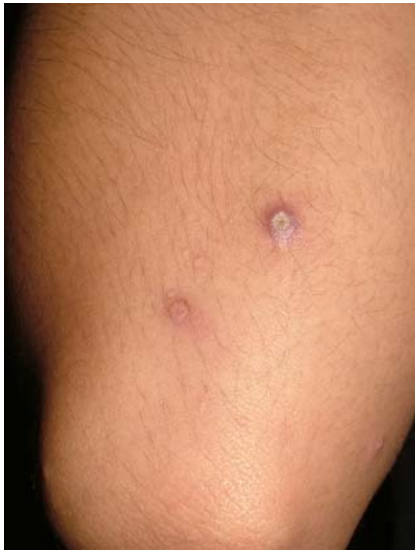

Fig. 17.2

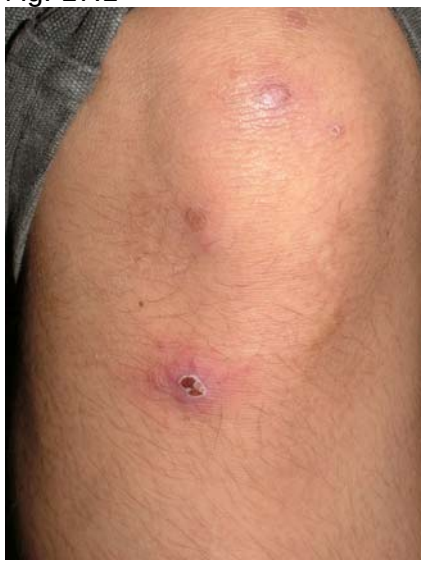

Fig. 17.3

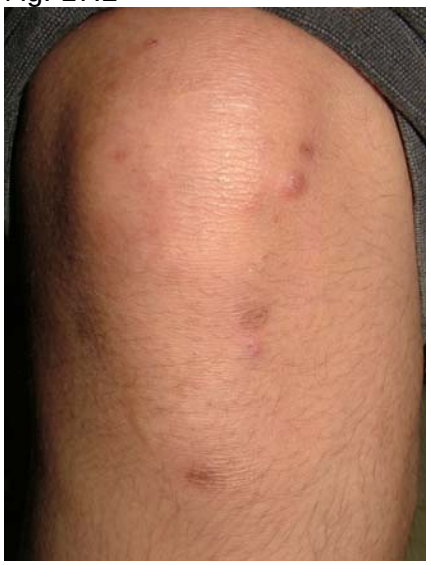

Fig. 17.4

Investigation:

PPD test: strongly positive (bullae 1.5 cms on erythematous patch 3 cms)

Chest X ray: normal chest film

Anti HIV: negative

Histopathology : (S09-3747) (Fig. 17.5,17.6)

- Central wedge-shaped necrosis of epidermis and upper dermis with serum-crust
- Central necrotic zone composed of nuclear debris and degenerated collagen
- infiltrate lymphocytes and histiocytes at the periphery of necrotic zone

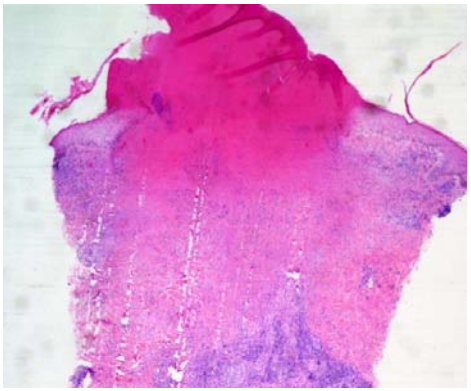

Fig. 17.5

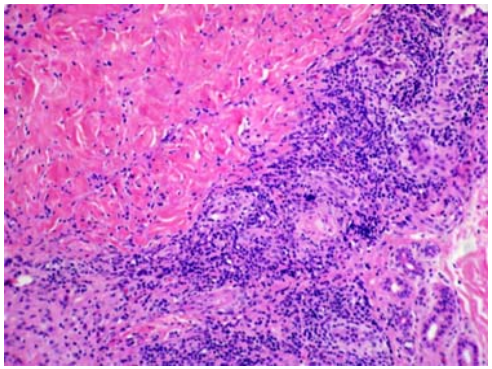

Fig. 17.6

FNA of Left cervical LN: (09-2124)

Necrotizing granulomatous lymphadenitis

No specimen for culture

Diagnosis: Papulonecrotic tuberculid (PNT) and TB lymph node

Treatment: Antituberculous drug (2IRZE/4IR)

Presenter: Suthinee Rutnin

Consultant: Ploysyne Busaracome

Discussion:

The term tuberculid comprises a heterogeneous group of cutaneous eruptions secondary to an internal focus of tuberculosis, which respond to antituberculosis medications.[1] It probably occurs as a result of hematogenous dissemination of *Mycobacterium tuberculosis* in an individual with a moderate

to high degree of immunity to the bacilli, and represents immunologic reactions to degenerated dead bacilli or antigenic fragments deposited in the skin and subcutaneous tissue.

PNT and lichen scrofulosorum are considered to be “true tuberculids,” as *M. tuberculosis* seems to play a significant etiologic role; in contrast, in erythema induratum of Bazin, which is considered to be a “facultative tuberculid,” the bacillus is one of several triggering factors.

PNT is rare, with a predominance in children and young adults.[2] The vast majority of cases occur in patients infected with *M. tuberculosis*, although there have been reports of PNT associated with *M. kansasii* [3]

M. avium complex,[4] and *M. bovis* infections.[5] There have also been atypical cases reported after bacillus Calmette–Gue’rin (BCG) vaccination.[6, 7]

The clinical picture is characterized by recurring crops of symmetrical, firm, red papules with a central depression covered by an adherent crust, which fade spontaneously in a few weeks, leaving

hyperpigmented and mostly varioliform atrophic scars. The eruption is usually asymptomatic,
but eventually itchy. Recurring crops may occur over a period of months or even years. The most commonly affected areas are the extensor surfaces
of the legs and arms, knees, elbows, hands, and feet; however,
the ears, face, and buttocks may be affected.[2]

Histopathologic finding show characteristically wedge-shaped necrosis in the upper dermis extends into the epidermis. The inflammatory infiltrate surrounding this necrotic area may be nonspecific but usually have tuberculoid reactions. Involvement of the blood vessels is a cardinal feature and consists of an obliterative and sometimes granulomatous vasculitis leading to thrombosis and complete occlusion of the vascular channels. Mycobacterium bacilli have never been detected by AFB stain and culture from any skin lesion of PNT.[1,2] However, mycobacterium tuberculosis DNA was detected in about 50% of the lesions by using polymerase chain reaction (PCR).[8]

The optimal treatment of cutaneous tuberculosis including PNT is similar to antituberculosis regimen in pulmonary tuberculosis. Although spontaneous remission may occurred.[9] Skin lesions usually have rapid response to antituberculous drug and complete healing can be expected within 4 to 12 weeks.[2]

References :

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