

Dermato-venereological Quiz

CC Koh 許招財 and KC Lee 李景中

A 25-year-old man presented with a dermatology clinic with a generalised erythematous papular rash over the trunk, upper and lower limbs for four months which was neither itchy nor painful. It had persisted for four months even after topical steroid treatment and there was no systemic upset. He had a history of eczema and was put on topical treatment. He did not take any medication prior to the onset of the rash.

Physical examination revealed multiple monomorphic erythematous papules over the chest, abdomen, back, neck, arm, forearms and thighs (Figure 1), which was neither scaly nor tender. The mucosa, scalp and nails were not involved. Skin biopsy showed multiple ill-formed non-caseating granulomas in the dermis made up of epithelioid cells, scattered multinucleated giant cells mixed with lymphocytes and plasma cells. An incisional biopsy was repeated and the histological findings are shown in Figures 2-5.



Figure 1. Multiple papular lesions over the trunk and limbs.

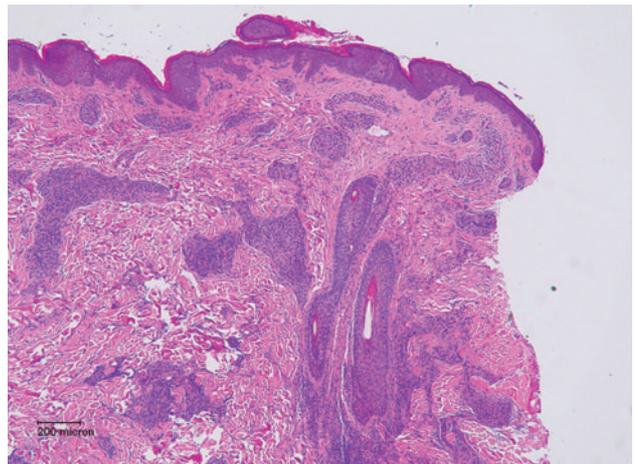


Figure 2. Elongated aggregates of inflammatory cells in the dermis with normal epidermis (Haematoxylin & Eosin stain).

Social Hygiene Service, Department of Health, Hong Kong

CC Koh, MBBS(HK), MRCP(UK)

Department of Pathology, St. Paul's Hospital, Hong Kong

KC Lee, FRCPA, FHKAM(Pathology)

Correspondence to: Dr. CC Koh

Cheung Sha Wan Dermatology Clinic, 3/F, West Kowloon Health Centre, 303 Cheung Sha Wan Road, Kowloon, Hong Kong

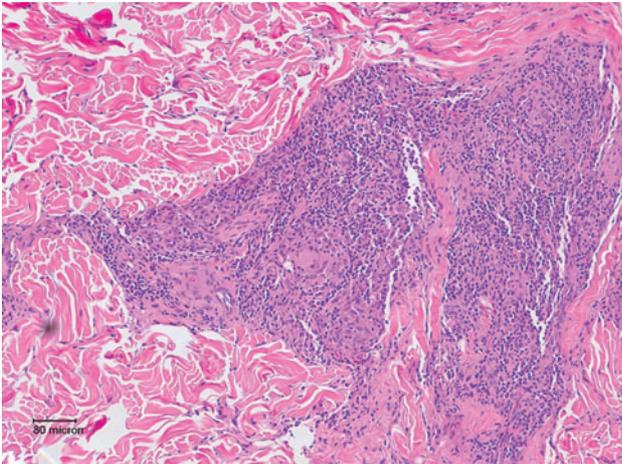


Figure 3. The inflammatory cells consist of histiocytes forming ill-defined granulomas and plasma cells. Note the preserved nerve fibres (Haematoxylin & Eosin stain).

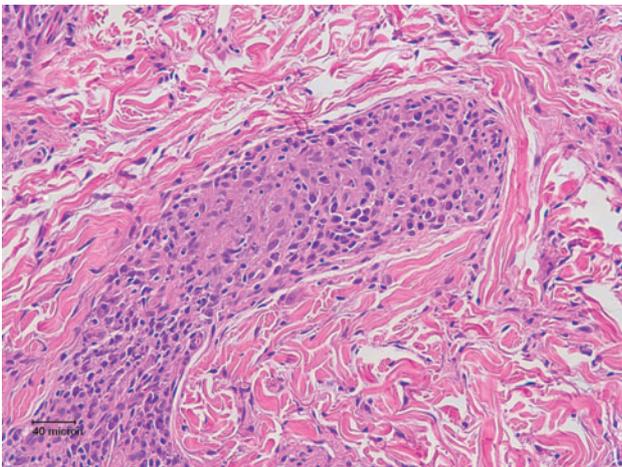


Figure 4. High power view showing an ill-formed granuloma and plasma cells (Haematoxylin & Eosin stain).

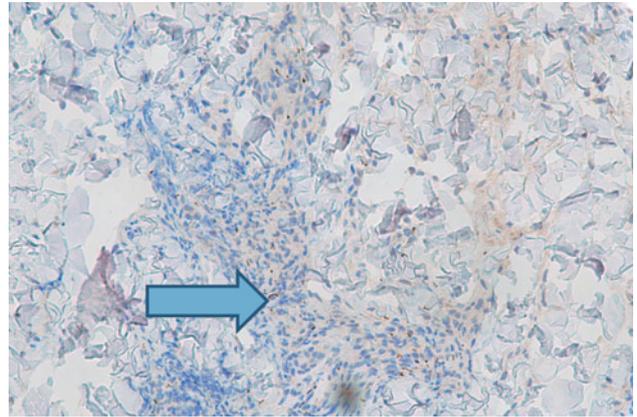


Figure 5. Immunostaining for the suspected pathogen.

Questions

- 1) What are the differential diagnoses?
- 2) What are the histological features and diagnosis?
- 3) What are the essential points in the history and what blood tests are needed to confirm the diagnosis?
- 4) What is the management plan?

(Answers on page 100)

Answers to Dermato-venereological Quiz on pages 91-92

1. The differential diagnoses include secondary syphilis, leprosy, sarcoidosis, lichen planus, pityriasis lichenoides chronica, papular eczema, pityriasis rosea, guttate psoriasis, urticarial vasculitis, pseudolymphoma, cutaneous lymphoma and leukaemia.
2. There are different types of granuloma. Sarcoidal granulomas (e.g. sarcoidosis) are composed of epithelioid histiocytes with a paucity of surrounding lymphocytes and plasma cells and no central necrosis. Tuberculoid granulomas (e.g. tuberculosis, leprosy, syphilis) are composed of epithelioid histiocytes, giant cells of Langhans type with more substantial lymphocytes and plasma cells infiltration together with central necrosis in some cases. Necrobiotic granulomas (e.g. granuloma annulare, rheumatoid nodules) are composed of epithelioid histiocytes, lymphocytes and occasional giant cells with necrobiosis of collagen. Suppurative granulomas (e.g. deep fungal infection) consist of epithelioid histiocytes and multinucleated giant cells with central collection of neutrophils. Foreign body granulomas (e.g. exogenous and endogenous foreign body) are composed of epithelioid histiocytes, foreign bodies-type multinucleated giant cells and other inflammatory cells.

The histology of this case shows a granuloma comprising of epithelioid histiocytes and many plasma cells. There is no caseation necrosis. Numerous *Treponemal pallidum* spirochaetes are demonstrated by immunostaining (Figure 5). The diagnosis is secondary syphilis.

3. It is important to exclude secondary syphilis for any generalised symmetrical non-itchy rash. A history of venereal exposure is an important indicator in a sexually-active patient. The patient had multiple sexual partners and *Treponemal pallidum* enzyme-linked immunoassay test (EIA-TP) was positive. The Venereal Disease Research laboratory (VDRL) titre was 1:128 and *Treponemal pallidum* particle agglutination (TPPA) test was also positive.
4. The patient was referred for treatment and screening for other sexually transmitted diseases. He was treated with benzathine penicillin 2.4 mega units intramuscularly weekly for two weeks. Health advice was given for regular monitoring of syphilis serology and partner referral was done.