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Case Report

A Rare Case of a Lichenoid Rash with Granulomatous Histology

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Abstract

Lichen Scrofulosorum, otherwise known as Tuberculid, is a hypersensitivity reaction to mycobacterium tuberculosis. It is a rarely seen pathology and it presents with a lichenoid rash and a granulomatous picture is seen on histology.

We present the case of a 72 year old man with a background of pleural and renal Tuberculosis, who presented with a 10 month history of lichenoid papules, widespread over the trunk and limbs. Skin biopsy showed granulomatous inflammation. This clinical picture and histology, together with a background of tuberculosis in the past, was highly suggestive of Lichen Scrofulosorum.

Although tuberculid occurs rarely, it may be the only marker of occult TB and which may not be discovered otherwise. Therefore it is important that skin physicians are able to detect and diagnose tuberculid and so treat accordingly.

Keywords: Lichen Scrofulosorum,Tuberculid ,Cutaneous Tuberculosis

Introduction

Cutaneous Tuberculosis (TB) is a rarely seen phenomenon occurring only in 1-2% of those infected with mycobacterium tuberculosis.[1] However, in recent years, lichen scrofulosorum has become the more commonly seen manifestation of cutaneous TB.[2]

Lichen Scrofulosorum, otherwise known as tuberculid, is a hypersensitivity reaction to mycobacterium tuberculosis or its' products. In recent years it has become the more commonly encountered form of cutaneous TB. It is a rarely seen pathology and it presents with a lichenoid rash and a granulomatous picture is seen on histology. We present a case of a 72 year old gentleman with this condition and an accompanying literature review.

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Case Report

A 72 year old Swiss gentleman presented with a 10-month history of lichenoid papules, measuring between 1 and 3 mm, coalescing in places to form plaques predominantly on his trunk and lower limbs; the lesions were generally asymptomatic, apart from being occasionally itchy.

There was no history of fever, weight loss or respiratory symptoms. General and systemic examination revealed no lymphadenopathy or organomegaly. Routine blood tests including serum ACE level were within normal limits. Chest X-ray did not show any abnormality.

Past medical history of note included left sided pleurisy at the age of 13 years, which was diagnosed as tuberculosis. He had no formal anti-tuberculous therapy but made a recovery until

the age of 16years, when he developed right sided renal tuberculosis, treated with nephrectomy.

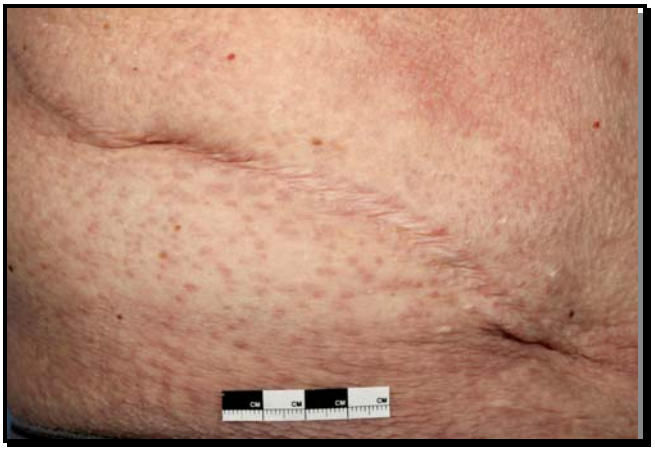

Figure 1: Lichenoid micropapules on the abdomen with an old nephrectomy scar in the background.

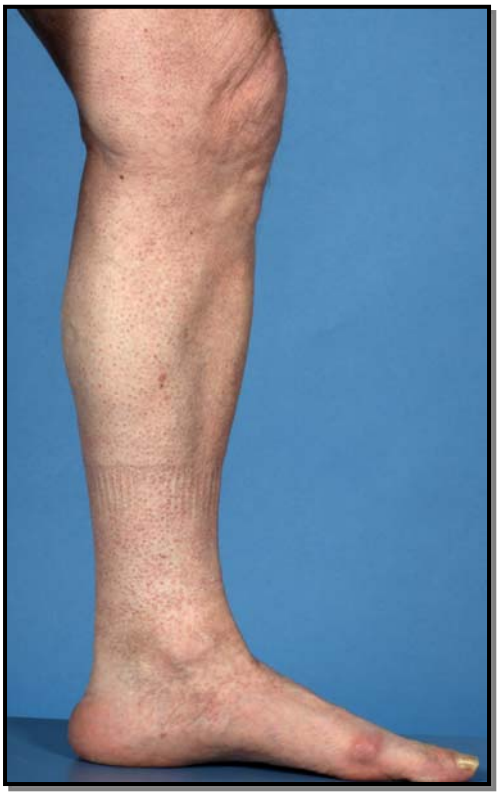

Figure 2: Lesions on the leg

He was then sent to live in the Mediterranean for a year to convalesce and was given a years' course of para-aminosalicyclic acid and possibly another anti-tuberculous medication. Since then, he had remained well, with no fever, sweats, weight loss, cough, sputum or haemoptysis.

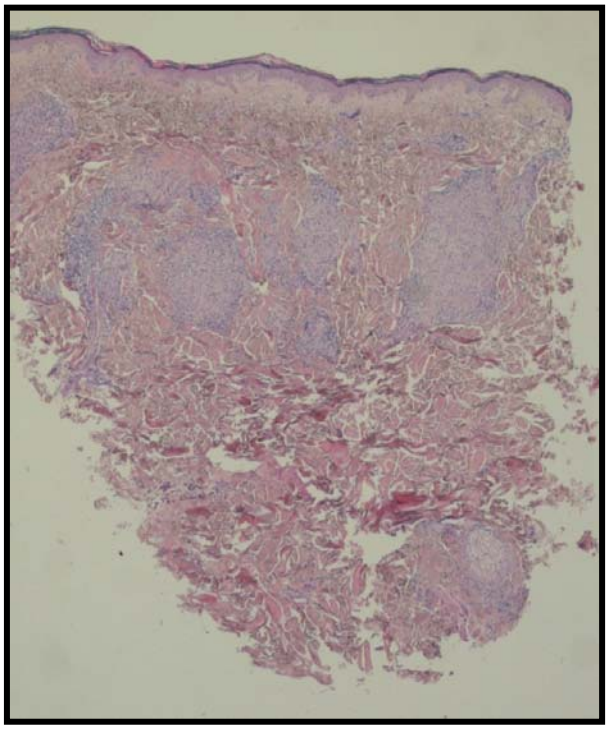

Figure 3: Skin biopsy showing granulomatous inflammation in the mid dermis.
Inset: Close-up of a granuloma at higher magnification

A skin biopsy was taken, which showed granulomatous inflammation in the mid dermis comprising mainly epithelioid macrophages with some lymphocytes and occasional multi-nuclear joint cells. There was no caseation necrosis and no necrobiosis to suggest disseminated granuloma annulare. Of note, there were no acid fast bacilli on Ziehl-Nielsen staining.

Discussion

There are only a few conditions presenting with a lichenoid rash and granulomatous histology. These include lichen scrofulosorum, sarcoidosis and secondary syphilis. The lichenoid forms of sarcoidosis and syphilis are extremely rare. The histology did not show typical sarcoidal granulomas and serum ACE levels and chest X- Ray

were not supportive of sarcoidosis. This clinical picture and histology, together with a background of tuberculosis in the past, was highly suggestive of Lichen Scrofulosorum. This is also known as tuberculid and is a hypersensitivity reaction to mycobacterium tuberculosis or its products in a patient with significant immunity. It is generally seen in patients who have a strongly positive tuberculin test and evidence of manifest or past tuberculosis; which tends to respond well to anti-tuberculous therapy.

Lichen Scrofulsorum was first described by Hebra, in 1860. He described it as an eruption of miliary papules of pale yellow/reddish brown colour, disposed in groups sometimes forming circles.[3] Children and adolescents are most commonly affected and lesions can persist, unchanged for a long time, followed by spontaneous and gradual resolution which may occur months to years later. The lesions are typically epithelial cell granulomata that are follicular or perifollicular and ZN stains are usually negative .[4] It may be associated with chronic tuberculosis affecting the lymph nodes, bones and pleura, and has also been observed following mycobacterium avium intracellular infection and after BCG vaccination.[5]

Important differential diagnoses to consider include: Keratosis pilaris, lichen nitidus, lichen spinulosis, pityriasis rubra pillaris, syphilid (lichen syphiliticus in tertiary syphilis), fungalid (lichen tricophyticus with an inflammatory dermatophyte infection). Similar lesions, but usually not grouped, can be found with follicular lichen planus, lichenoid sarcoidosis and scurvy (lichen scorbuticus, usually with haemorrhage).[6] The postulated pathology is that it is a hypersensitivity reaction to antigens to mycobacterium tuberculosis which is released by a distant focus of infection. [7]

In our patient, the T-Spot test came back as reactive, suggesting ongoing T cell activation to mycobacterium tuberculosis, consistent with either latent or active TB infection. He was treated with 3 months of Rifampicin and Isoniazid at the end of which the lesions had completely cleared. The case is presented for readers' interest in a rarely encountered dermatosis.

References

1. James, Berger & Elston. *Andrews' Diseases of the Skin Clinical Dermatology*, 11th ed, Elsevier, 2011. p.322.
2. Sethuraman, Ramesh, Ramam. Skin Tuberculosis in Children: learning from India. *Dermatol Clin.* 2008 Apr;26(2):285-94.
3. Henry G. Piffard. A *Treatise On The Materia Medica And Therapeutics Of The Skin*. New York, W. Wood & Co., 1882.
4. Dogra N, Shah S& Dogra D. Lichen Scrofulosorum: An important marker of occult TB. *Indian J Dermatol*. 2008; 53(2): 91–92.
5. Fitzpatrick and Freedberg et al., *Fitzpatrick's Dermatology in General Medicine*, 1999.
6. Otto Braun-Falco et al., *Dermatology*. 2nd edition, Springer, 2000.
7. Chen, RL, Barnette Jr D, Papulonecrotic *Tuberculids*. 2012, http://emedicine.medscape.com/article/1105234-overview