Concentric rings simulating tinea imbricata in secondary syphilis

A case report

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SUMMARY A female patient with secondary syphilis presented with concentric rings of papules simulating tinea imbricata. To avoid the occurrence of "ping-pong" syphilis, it is stressed that both sexual partners should be treated simultaneously.

Introduction

Syphilis has been aptly described as the "great imitator." The surface lesions of secondary syphilis may simulate many other dermatological conditions.¹ Grouping of lesions or annular configurations always brings syphilis into the differential diagnosis. In annular lesions the rings may be complete or part of the rings may be missing. They may occasionally form polycyclic or gyrate patterns,³ but concentric lesions are extremely rare; for this reason we are reporting this case.

Case report

A 20-year-old female patient attended the dermatology and venereology department on 25 April 1979 with multiple papules on the genitalia and an annular lesion on the front of the chest of two months' duration. Her husband had had some skin lesions and ulceration of the genitalia four months previously and the Venereal Disease Research Laboratory (VDRL) test had given a positive result on his serum at a 1/64 dilution; he was diagnosed as having secondary syphilis and was treated with benzathine penicillin 2.4 megaunits intramuscularly.

At that time the patient had been examined by the same doctor and she was found to be free of syphilitic infection clinically and serologically; hence no treatment was given to her. When she presented to the department on 25 April 1979 she denied any

history of extramarital sexual contact. On examination she was slightly anaemic. There were multiple greyish moist papules on the genitalia (fig 1), multiple papular and scaly lesions on the trunk, limbs, and buttocks (fig 1), pigmented macules on the palms and soles, an annular lesion on the front of the chest (fig 2), and concentric rings of papules on the back (fig 3). The hard palate showed erosions. There was no lymphadenopathy, bone involvement, or alopecia. The liver and spleen were not palpable.

FIG 1 Moist papules on the genitalia and papular lesions on the buttocks

INVESTIGATIONS

Her haemoglobin was 10 g/dl. Darkground examination showed *Treponema pallidum* from the genital lesions; the serum VDRL test was reactive at a 1/8 dilution; fungus was not demonstrable by direct examination or culture of scrapings from the

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FIG 2 Annular lesion on the front of the chest

FIG 3 Concentric rings of papules on the back

concentric lesions. Radiographs of bones and joints of the upper and lower limbs did not show any abnormality. Chest radiographs were also normal. Biopsy of the concentric lesion showed a dense inflammatory infiltrate with lymphocytes and plasma cells in the dermis especially around the blood vessels, which showed endothelial proliferation.

The husband of this patient was examined again. He did not show any lesions and his serum VDRL test was non-reactive. Both the patient and her husband were treated with benzathine penicillin 2.4 megaunits i.m. The patient's lesions were not treated by local medication. The concentric lesions started

regressing on the fifth day after treatment and disappeared completely after about two weeks. The pigmentation persisted for about two months.

Discussion

This patient presented with classical lesions of secondary syphilis, which was confirmed by the demonstration of *T pallidum* from the genital lesion and a reactive VDRL test. The concentric lesion was also due to syphilis because it resembled the annular lesion. The biopsy findings were consistent with the diagnosis of secondary syphilis and the lesion responded well to antisyphilitic treatment. Tinea imbricata was excluded from the diagnosis because of the absence of fungus and the response of the lesion to antisyphilitic treatment. Annular lesions in secondary syphilis are well known,¹⁻³ but concentric lesions are not mentioned in the literature. An illustration of concentric lesions in secondary syphilis is given by Rudolph and Olansky.⁴ Thus, concentric rings of papules, although rare, can occur in secondary syphilis and tinea imbricata should also be included in the differential diagnosis of secondary syphilis.

In this case, because her husband had signs of secondary syphilis, the patient was also examined but not treated as she showed no evidence of infection. Later however she presented with classical secondary syphilis. The infection might have been in the incubation period at that time and the primary lesions might have been hidden or transient.

This case also illustrates the importance of treating both partners simultaneously to avoid "ping-pong" syphilis. In 1948 Schamberg and Steiger⁵ reported that many apparent treatment failures were really due to reinfections.

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